

Foreign producing firms : a neglected form of multinational corporation

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Publication Date:

1998

DOI:

<https://doi.org/10.26190/unsworks/7999>

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Foreign Producing Firms: A Neglected Form of Multinational Corporation

Jane Fulton Craig

Dissertation

in partial fulfilment of the requirements for the

Degree of Doctor of Philosophy (PhD)

in Management

1998

**Australian Graduate School of Management
in the University of New South Wales**

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Title: **FOREIGN PRODUCING FIRMS: A NEGLECTED FORM OF MULTINATIONAL CORPORATION**

Abstract 350 words maximum:

This thesis consists of a series of papers researching how a class of firms which compete internationally as foreign producers, and have been neglected in the current literature, manage their international operations. The methodology applied in exploring this gap between the observed data on foreign producers, and the internationalisation literature, covers qualitative field research, quantitative taxonomic analysis and deductive theory building. The research contribution is in part a function of the multiple methodological approaches utilised. Chapter 1 describes the research problems addressed, discusses the theoretical context in which the thesis is based, and outlines the structure and contribution of the thesis.

Chapter 2 articulates the classification schema that brings foreign producers into focus and shows how existing models do not address the success of such firms. Chapter 3 shows that foreign producers make up a significant proportion of the world's largest multinationals, as identified by Stopford (1982), and reports their frequency by country and industry. Chapter 4 is a theory paper developing an ideal type organisational configuration which shows how foreign producers compete successfully. The foreign producer and global exporter are contrasted as orthogonal ideal types. Chapter 5 is an empirical and theory development paper which explains unanticipated findings about international human resource management in the Australian context in terms of the different demands faced by multinationals with different foreign market servicing strategies. Chapter 6 considers the policy implications of the emerging understanding of foreign producers. It finds problems in extending Porter's (1990) theory of the competitive advantage of nations to the New Zealand, Canadian and Australian economies. Chapter 7 concludes and identifies implications for research, relating to the determinants of a foreign producer strategy.

The primary contribution of the thesis is to the organisation theory domain of the internationalisation literature. It develops a new ideal type, explaining the success of the integrated foreign producer form. The existence of foreign producers as a material set of multinationals is established, and the normative theory underpinning competitive behaviour for them is developed. The research has important implications for the strategic human resource management of multinationals and for government policy supporting international firms.

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Acknowledgments

This thesis reflects a process that enabled me to learn a great deal from a skilled and insightful researcher, my supervisor Philip Yetton. Philip provided me with access to research problems, research sites and high level contacts with managers that are a rare gift for a doctoral candidate, and has been generous in his support and in encouraging my intellectual development. I gratefully acknowledge the magnitude of the contribution he has made to the undertaking and completion of this work. I would also like to express my warm thanks to Jeremy Davis who was a member of the research team that first began to investigate the phenomenon addressed by the thesis and has continuously been a valued mentor and guide.

I have been fortunate to receive help from many others while undertaking the thesis. Geoff Eagleson was both generous with his time and patient in helping me to structure the statistical analysis which strengthened the arguments in Chapter 3. Bob Wood provided helpful structuring and insights at the time of formulating the research focus. Lex Donaldson, Fred Hilmer, Kim Johnston and Ian Marsh commented on ideas and provided helpful advice, while Jennifer Doubell, Jessica Milner Davis and Roger Collins were encouraging and supportive at critical times.

Christ Church St Laurence, where I found belief, belonging and the elegance and wisdom of Fr Michael Bowie's sermons provided an important backdrop for completing this task, reinforced by The Music Practice, where I discovered music and Gillian Bonham's warmth and kind spirit. Finally, my heartfelt thanks go to Karel Vine, who played a crucial role in my completing this thesis.

Abstract

This thesis consists of a series of papers researching how a class of firms which compete internationally as foreign producers, and have been neglected in the current literature, manage their international operations. The methodology applied in exploring this gap between the observed data on foreign producers, and the internationalisation literature, covers qualitative field research, quantitative taxonomic analysis and deductive theory building. The research contribution is in part a function of the multiple methodological approaches utilised. Chapter 1 describes the research problems addressed, discusses the theoretical context in which the thesis is based, and outlines the structure and contribution of the thesis.

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The primary contribution of the thesis is to the organisation theory domain of the internationalisation literature. It develops a new ideal type, explaining the success of the integrated foreign producer form. The existence of foreign producers as a material set of multinationals is established, and the normative theory underpinning competitive behaviour for them is developed. The research has important implications for the strategic human resource management of multinationals and for government policy supporting international firms.

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Chapter 1

Introduction

1.1 Contribution

This thesis sets out to extend the literature on organisational configurations for multinational corporations (MNCs) by examining a relatively neglected form of international competition: foreign production as the primary vehicle for servicing foreign markets. The research is inductive, and is grounded in detailed understanding of a set of large, Australian-domiciled manufacturing firms, which create value by coordinating across dispersed production locations. Through a combination of empirical research and theory building, the loosely related papers which comprise the thesis explore how such firms compete effectively in international markets. The lens is turned within the firm, to focus on how it manages and coordinates this form of international competition. As such, the thesis is intended to add to the prevailing organisational models of MNCs, which do not explicitly articulate the behaviour and configuration of such firms.

This introductory chapter begins with a synopsis of the broad research problem: the existence of a gap between the observed behaviour of a set of multinationals and the internationalisation literature. The core descriptive data on the observed firms is briefly introduced followed by a summary of the existing literature. Finally, the research approach is described and the structure of the thesis outlined. Thus the intention of the introduction is to provide an overview of the scope of the thesis.

1.2 Research problem

This thesis had its genesis in a gap between the existing literature on internationalisation and observed data on the foreign market servicing behaviour of large Australian-domiciled manufacturing firms. In brief, a study into the competitiveness of

manufacturing firms in Australia (Australian Manufacturing Council [AMC] and Pappas, Carter, Evans and Koop/Telesis, 1990) revealed a set of internationally successful MNCs that did not conform to the dominant models for competing internationally. That gap between the literature and the data provides the motivation for and focus of the thesis.

There is general agreement among scholars in the international management field and managers in MNCs that competing successfully in international markets is vital for survival. National governments also have a stake in ensuring the international competitiveness of firms operating within their borders. These preoccupations are reflected in two themes which currently predominate in the management theory literature on internationalisation: how to manage the complexity inherent in the diversified MNC competing in multiple product and national markets and which national conditions are most conducive to fostering firms that will succeed in competing internationally¹ (e.g. Porter, 1990; Kogut, 1991; Shan and Hamilton, 1991; Murtha and Lenway, 1994). Both issues remain unresolved in the literature and difficult for firms and governments to manage.

In considering these issues, two strategies for competing globally and their attendant organisation forms are the current focus. One group of scholars, drawing on organisation theory, proposes models for integrated networked worldwide operations (Hedlund, 1986; Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989). Their main interest is managing the complexity created by operating in multiple national markets with a diversified product portfolio (Doz and Prahalad, 1991; Ghoshal and Westney, 1993). This “global chess” strategy typically entails significant levels of both exporting and foreign production, and requires coordination across national, regional or even product groupings (e.g. Kogut, 1985a). The transnational, which Bartlett and Ghoshal (1989) advocate as the MNC form best able to compete and win in this way in global markets, is perhaps the most widely recognised of these models. Others (e.g. Porter, 1990) advocate the value of global

¹ Rumelt, Schendel and Teece (1994, p.46) identify this as one of the questions that helps define the field of strategic management.

exporters, who engage in high volume exports from centralised home-base production, as being the best able to innovate continuously, and thus survive in increasingly competitive global markets. This work, which typically draws on strategy and industrial organisation models, focuses on the national market conditions most conducive to sustaining successful global exporters.

Both these recommended approaches stand in contrast to a multidomestic strategy for MNCs, which involves managing multiple dispersed production locations as a portfolio of separate national businesses (Hout, Porter and Rudden, 1982; Bartlett and Ghoshal, 1989; Porter, 1990; Yip, 1992). Although this has been a commonly observed and described pattern of behaviour for MNCs that produce and sell in multiple locations, it is considered to be vulnerable to competitors who coordinate globally, either as global exporters or transnationals.²

These models do not, however, describe or explain the pattern of behaviour of the largest Australian domiciled manufacturing firms. This gap between the literature and observed data was revealed by a study into the competitiveness of the manufacturing sector in the face of increasing globalisation (AMC et al, 1990). The study noted that all the locally-domiciled large manufacturing firms that competed internationally did so by means of foreign production. They did not engage in exporting. The finding was paradoxical in light of the prevailing public policy assumptions that exports constitute the key indicator of success in international markets, and that encouraging increased export activity by manufacturing firms should be a central goal of government policy. In contrast, here was a group of firms that did not export, yet were internationally competitive in their own industries.³ Further, the Australian manufacturing sector was shown to be clearly

² It is also considered problematic by those concerned with ensuring national growth because of the perceived export of employment and investment.

³ In identifying this pattern of data, the report commented "*A second paradox is that Australia does have a significant number of large and successful indigenous manufacturing firms. The problem is that most of them export very little, even though they may have extensive operations overseas. The clear pattern among the top twenty [large indigenous manufacturing] firms was that most do very little exporting, even though the majority have expanded by acquisition overseas, essentially replicating their home business in other countries.*" (AMC et al, 1990, p.133).

dominated by that form. Only four firms⁴ among the twenty largest took either the global exporter or “full MNC”⁵ form traditionally associated with competing in global markets.

In a study subsequently investigating that paradox (Yetton, Davis and Swan, 1992), it became apparent that MNCs of the type that dominate the portfolio of Australian manufacturing firms operate in a manner that is neither described nor explained in the current literature. Since the Australian manufacturing MNCs have dispersed production locations, on the face of it they appear to be running a multidomestic strategy.⁶ However, follow-up field research (Yetton, Davis and Swan, 1992) revealed that they coordinate across their dispersed manufacturing sites rather than operating them as a portfolio of separate national activities, and that the means by which they do this differs from the operating pattern of the transnational.

Accordingly, this thesis sets out to investigate the phenomenon of such firms, and to utilise that understanding to extend existing theory on internationalisation. The data that were observed, which form one side of the data-literature gap, are described in more detail in the following section to provide the reader with a picture of the phenomenon that originally presented itself. The subsequent section then delineates the other side of the data-literature gap by providing a summary of the internationalisation literature, in order to indicate the various foci of research in that field and to illustrate its divergence from the experience of the observed firms.

1.3 Observed data

The observed data came to light in the course of a study into the international competitiveness of Australian manufacturing firms, commissioned by a tripartite body comprising high level national government, trade union and corporate representation. That study was primarily concerned with advancing a national policy agenda on

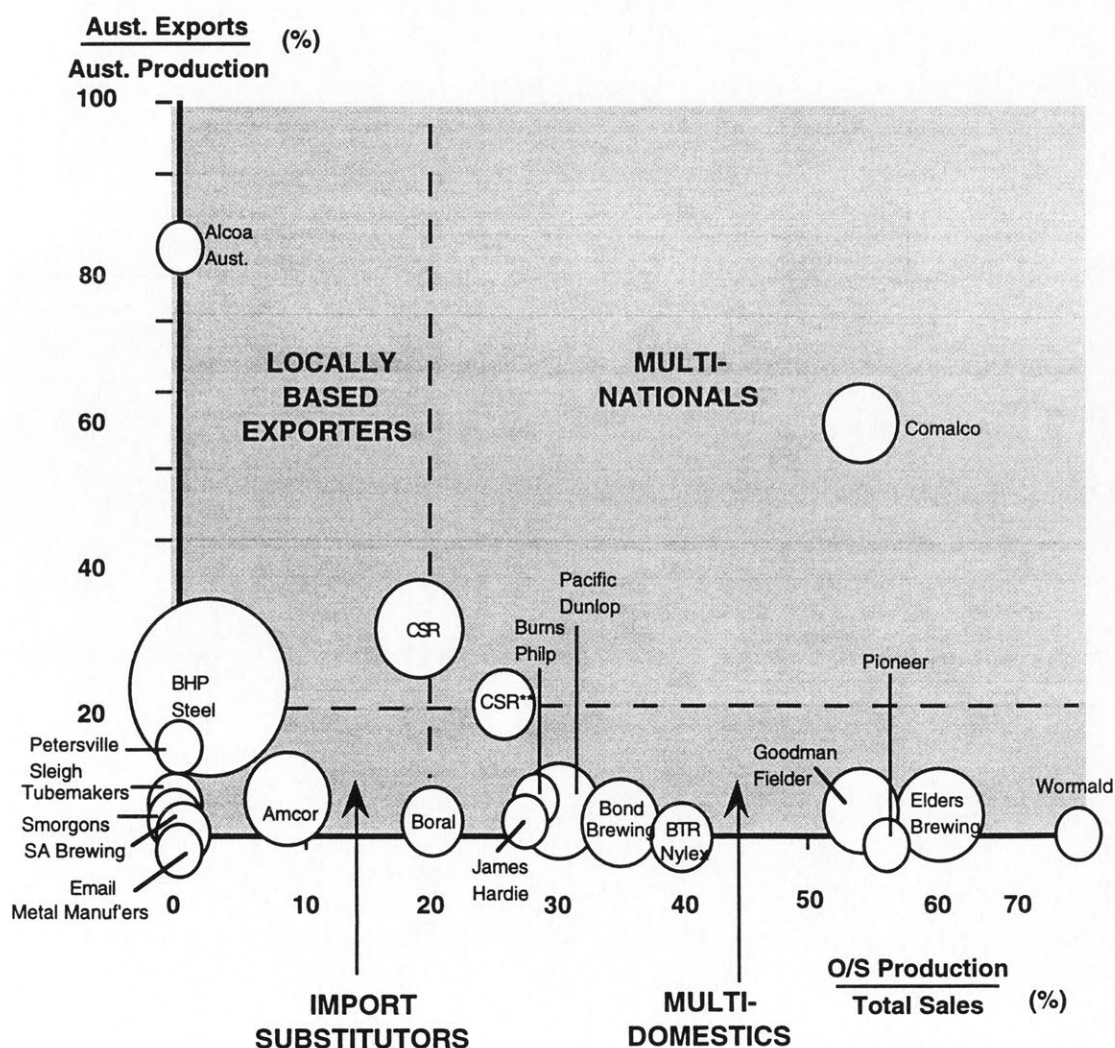
⁴ BHP, Alcoa Australia, CSR and Comalco.

⁵ i.e. firms that have a relatively high level of both exports and foreign production.

⁶ Indeed, that report dubbed those firms “multidomestics” precisely because of their propensity to produce in multiple national markets.

increasing manufacturing exports. As such, one of its working assumptions was that exports provide the key indicator of success in international markets. In turn, lack of export behaviour was thought to indicate that firms were not internationally competitive. It was in light of this dominant logic, which prevailed at both policy and industry levels, that one of the study's key findings - the existence of successful firms that did not export, appeared to be a paradox. Figure 1.1, below, from the original report, captures this finding as well as making evident the dominance of the foreign producing form in the national portfolio.

Figure 1.1: International behaviour of the large Australian-based Manufacturers*



Source: Exhibit 7F, (AMC et al, 1990, p.133)

* (Sales > \$1 billion 88/89)

** Building Products Division only

Note: Circle size represents 88/89 sales

The figure locates firms according to the proportion of Australian production that is exported on the vertical axis and the proportion of total sales that is accounted for by overseas production on the horizontal axis. The information was obtained from annual reports, supplemented by company interviews.

It is important to note that Figure 1.1 depicts the population of large Australian-based firms, defined as those with 1988/89 sales in excess of \$1 billion, rather than a sample. Twenty manufacturing companies were identified as meeting that size criterion in the original study (AMC et al, 1990, p.133). Companies such as the automotive firms, oil companies, and some consumer products firms that clearly function as part of overseas-based multinational networks, and have limited mandates to launch new exports from Australia, were excluded.

The firms and their categorisation in this fashion was described in the following terms by the original consulting report (AMC et al, 1990, pp.134-135):

"The twenty firms may be characterised as follows:

BHP Steel, standing out as Australia's only large complex factor exporter and major case of a strategic exporting company.* BHP Steel's exports are now in the vicinity of \$A1 billion per annum and are projected to increase to over \$A2 billion in the next few years. Their strategy includes upgrading of technology (for example, all their steel will soon be continuously cast), a shift upwards on the scale of value added per tonne and into more speciality lines (especially coated and painted steels), where they are less vulnerable to the ups and downs of commodity steel trade. They have over 30 permanent establishments overseas for customer service and product adaptation, mainly in the USA and Asia

The aluminium companies, Comalco and Alcoa of Australia, which export large amounts of alumina and aluminium based on strong resource cost advantages, and much smaller amounts of downstream aluminium products. Comalco is a true multinational, with major operations in New Zealand, the USA and Italy as well as Australia

The "multidomestics", a class of firms that have strong competitive positions in Australia that they have replicated by acquisition abroad, but which tend to focus mainly on domestic markets both here and overseas rather than on producing tradeable goods. They include: Elders Brewing, Pioneer Concrete Services, Goodman Fielder Wattie, BTR Nylex, Bond Brewing, Burns Philp, James Hardie, CSR, (excluding sugar), Boral, Wormald and (joining the group through a staged acquisition) AMCOR. (There is another strong group of Australian "multidomestics" in transport services, which consists of Brambles, TNT and Mayne Nickless.)

Pacific Dunlop, a unique case, which produces tradeable goods such as batteries, tyres and clothing for the domestic market and in overseas countries for their markets, plus latex products in Malaysia that are sold worldwide, but which exports relatively little from Australia

A group of largely import-substituting firms that participate in tradeable-goods production but have maintained a primary focus on the domestic market: Email, Metal Manufactures, SA Brewing and Tubemakers.

* BHP Steel is classified as a complex factor business and not a resource-based one because its relative competitiveness in terms of costs and prices per tonne rests more on its technology and plant scale, the quality of its products and its skills, and productivity, than on its location in a country that produces iron ore and coking coal. Its competitors, in Japan and Korea, particularly, also use Australian raw materials extensively."

A national pattern of this nature was *a priori* unusual. First, the existence of apparently competitive⁷ manufacturers that do not export was unexpected at the time and struck analysts as paradoxical. Part of the unexpectedness stemmed from the policy focus at national government level, which formed the motivation for the original study that revealed this finding. In the context of performance of a national economy, manufacturing exports are considered vital for long-term viability, contributing both to favourable terms of trade and job creation. This mindset reflects one subset of the internationalisation research, which examines ways to increase export behaviour (for example, Porter, 1990; Williamson, 1990; Auquier, 1980). In this policy context, firms which do not obviously generate either export dollars or jobs would not have high salience. The preponderance of foreign producing firms therefore raises a series of questions for government, because the contribution they might make to a national economy is little understood.

Part of the unexpectedness also arose from the broadly held view in national government policy circles that low export levels reflect an underlying lack of competitiveness within the manufacturing sector, and that microeconomic reform was required to remedy the problem. Against the assumption that exports are the key metric for industry

⁷ One indicator of their success is that 6 of these primarily foreign producing firms were included among the 428 of the world's largest industrial corporations profiled in the *Directory of Multinationals* (Stopford, 1992): AMCOR, Boral, CSR, Goodman Fielder Wattie, Pacific Dunlop and Pioneer. Criteria for selection for this listing include that the firm had consolidated sales of over US\$1 billion and significant international operations during 1990. The *Directory*, which concentrates on manufacturing companies, excludes firms that operate predominantly in the service sectors, as well as foreign controlled family companies and major foreign subsidiaries (Stopford, 1992, p.xii).

competitiveness, the evidence of firms that do not export, but nevertheless have significant and successful international activity, appeared to present a paradox.

Additionally, firms which engage primarily in foreign production are generally not considered to have a sustainable advantage in international competition. The international management theory literature, which is the most directly relevant for the thesis, variously assumes (Porter, 1990; Yip, 1992) or observes (Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989; Ghoshal and Nohria, 1993) that firms with a portfolio of dispersed foreign production locations do not coordinate across their sites, and therefore are vulnerable to competitors who do so. The term multidomestic was originally coined to describe such firms (Hout, Porter and Rudden, 1982), and that is the sense in which authors such as Porter (1986; 1990) and Yip (1992) use it. Further, by implication, such firms should not persist over time. They would be expected to fail in the face of competition from either global exporters (Porter, 1986; 1990) or transnationals (Bartlett and Ghoshal, 1989). By contrast the foreign producing Australian firms, which operate dispersed production locations, appear to have been successful in international markets, and to have maintained the foreign producing strategy over time.⁸

The lack of exporting behaviour was of particular concern to the national government at the time of the original consulting report (AMC et al, 1990) that made this distinctive pattern evident. In light of that finding, the Australian Manufacturing Council commissioned a follow-up study to examine the contribution that the apparently multidomestic firms might make to the Australian economy and, in particular, to its balance of trade. That study focused on understanding the process and pattern of the internationalisation of the population of successful, locally-domiciled Australian international manufacturing firms (Yetton, Davis and Swan, 1992). It asked how Australia's largest manufacturing firms that operate internationally competed and won,

⁸ Updated information gathered from these firms indicates that the trend is for them to increase their levels of foreign production, and maintain static, low export levels over a five year period (Yetton and Craig, 1995). The firms remain concentrated in the multi-domestic (and to a lesser degree, import substitutor) category of Figure 1.1.

and whether Australian firms were somehow unique in this respect. The policy subtext was whether and how those firms could be induced to export.

In order to explore the origins of this apparently unusual national configuration - the preponderance of foreign producers with virtually none of the exporting MNCs that are so widely assumed to be “normal”- that study analysed the firms’ behaviour on a number of dimensions. In doing so, it drew on analysis of a variety of Australian and international data bases about international firms as well as qualitative and company information research on the foreign producers conducted for the Australian Manufacturing Council.

Appendix 1 provides a summary of the findings, as well as exploring the question that they raise in the policy context - whether it is effective to target policies aimed at inducing export behaviour at these firms. Additionally, that paper asks what alternatives exist for developing firms with high levels of exporting, if the strategy and core competencies of the largest Australian-based manufacturers are not consistent with exporting. Because the understanding that evolved through that research project also forms part of the underpinning data for the theory developed in this thesis, the salient findings are outlined here.

Perhaps most importantly, the field research into these firms revealed additional information which forms the second aspect of the core of the research problem this thesis addresses, and which is not evident from the quantitative descriptive data captured in Figure 1.1. Specifically, the research revealed that the firms coordinate many activities across their dispersed foreign production locations. They do not simply hold a portfolio of stand-alone national operations, as is the case with firms termed multidomestic in the existing internationalisation literature. It is the concurrence of these two characteristics - foreign production as the primary foreign market servicing mode combined with coordination of dispersed production locations, that distinguishes these firms from those

most thoroughly addressed in the literature. A fuller discussion of these points of difference appears in Chapter 2.

The Australian foreign producers' products are those where transport costs and technology favour overseas production over exports as the means of expanding internationally⁹ - e.g. building materials, beverages, foodstuffs, packaging material.

Table 1.1 lists the firms and their primary product category. Most are single or related product firms, rather than unrelated conglomerates.

Table 1.1: Australian foreign producers

Firm	Product
AMCOR	Paper and packaging
Bond Brewing	Beverages
Boral	Building products
Burns Philp	Food
BTR Nylex	Diversified (unrelated)
CSR, Building products	Building materials
Elders Brewing	Drink
Goodman Fielder Wattie	Food
James Hardie	Building materials
Metal Manufacturers	Metals
Pacific Dunlop	Diversified (unrelated)
Pioneer	Building materials
SA Brewing	Drink
Tubemakers	Steel fabric ⁿ & distrib ⁿ
Wormald	Fire & building systems

The study concludes that the foreign producers are typical of competitive international firms in the same industries (i.e. food, building materials, drink), and therefore that the absence of exports does not reflect an underlying lack of competitiveness on their part. Instead, how firms compete offshore appears to vary according to the tradeability of the

⁹ One might speculate that Australian-owned firms are concentrated in such product markets because the highly traded sectors in the Australian economy have historically been dominated by MNCs whose home base is overseas (typically Japan, the US or the UK). This is the case for consumer electronics, motor vehicles, petrochemicals and heavy electrical equipment, for instance. These are the industries in which export behaviour is highly prevalent.

product, defined as the extent to which products are traded across international boundaries. As such, tradeability of the product is proposed as the determinant of whether exporting or foreign production is the appropriate mechanism for competing internationally.

For each of these MNCs, the firm's own unique skill set, which allows it to compete and win effectively in its markets, is highly specific to the product and the way in which it competes. This is consistent with organisation theory literature, where there is strong evidence that successful firms have achieved a high level of fit between their strategy, structure and management processes which gives them a competitive edge (Van de Ven and Drazin, 1985; Doty, Glick and Huber, 1993). One element of that fit for all the Australian foreign producers is a particular set of skills related to managing and establishing multiple production units in geographically distant locations (Yetton, 1991). This involves, among other things, a distinctive tight/loose combination of structure and management control systems that allows enough regional autonomy to satisfy local market conditions at the same time as ensuring that cost and technology management are standardised across locations. Striking this balance has been the result of enforced learning in the Australian market which is characterised by small centres of population concentration, separated by long distances. To grow to any significant scale in the Australian market a firm has had to learn how to manage these issues effectively.

The study (Yetton, Davis and Swan, 1992) concluded that, in effect, these firms have evolved a fit based around a strategic agenda that involves "rolling out" medium sized plant units, with highly specific management processes, and often proprietary technology, in geographically distant locations. The fit required to manage a large scale plant for export from Australia would demand quite different organisational competences. The firms are therefore more likely to continue growing overseas by foreign production rather than by exporting.

This then represents a brief summary of the behaviour and operating gestalt of the firms that were observed to dominate the Australian manufacturing sector. This outline sketch of the observed data delineates one side of the gap between data and literature which forms the core of this thesis. The next task is to provide a synopsis of the internationalisation literature, which constitutes the other side of that gap.

1.4 Internationalisation literature

Instead of providing a conventional literature review, the literature is presented using a framework based on the process of internationalisation from the firm's perspective. There are several reasons for adopting such an approach. Because the thesis addresses a series of issues rather than a single question, the substantive treatment of the literature is to be found within each chapter, focused on the particular dimension of the data-literature gap that forms its subject. These issues range somewhat more widely than would allow a single, cohesive summary literature review here in the introduction. Additionally, because it has its genesis in a neglected phenomenon, the research in the thesis cannot be straightforwardly located against the historical or explicit thematic development of the existing literature. That has evolved in response to, and is therefore organised around, different research questions than the ones raised in this thesis.

The task of providing an overview treatment of the literature is further complicated by the diverse and fragmentary nature of the internationalisation field itself (Melin, 1992), which makes it difficult to trace cumulative streams of scholarship or to provide an integrated synopsis of the existing literature. The two main themes identified at the beginning of this chapter as currently predominant in the management literature on internationalisation stand on the shoulders of a large and diverse body of research into the behaviour of MNCs. This wider literature on how firms compete internationally has grown in scope and complexity as global competition has increased over the past three decades, and contributor disciplines span a range of fields from economics through to comparative

management (Wright and Ricks, 1994). The literature has been, and to an extent continues to be, fragmented (Melin, 1992).¹⁰

Two factors contribute to the continuing fragmentation. One is the diversity of researcher backgrounds, and the tendency to conduct single rather than multi-disciplinary research (Wright and Ricks, 1994). The other is the sequential, problem-driven nature of the research agenda, which has resulted in a body of knowledge that is selectively additive. Although the broad class of internationalisation research is cumulative to the extent that the findings about one internationalisation decision are often implicitly adopted in investigating another, the findings across research questions remain largely unintegrated. As Buckley (1983, p.48) has noted, the "... development from naive entrant to established multinational has been inadequately modelled and its implications for theory are as yet unassimilated."

Nevertheless, two general observations can be made about the internationalisation literature. First, over time, the emphasis has shifted gradually from markets to the firm and its pattern of behaviour, beginning with Hymer (1960), and then to inside the firm. It is only relatively recently that the firm itself, the focus of inquiry in this thesis, has become the focus of attention (Dunning, 1979; Melin, 1992). Prior to the 1970s much of the interest in MNCs was on aggregate patterns of trade and foreign direct investment (FDI) activity, often comparing across industries or nations (e.g. Vernon, 1966; Kindleberger, 1969). Second, the literature has tended to reflect the prevailing preoccupations of both governments and large MNCs. In that sense, it has been primarily problem driven, and reflects the historical development of one class of MNCs. The thesis shares these two broadly construed characteristics of the wider literature: a focus on the firm itself, and a problem-derived genesis.

In light of these issues, the literature is organised here into clusters of research which each deal with the set of decisions a firm faces as it undertakes the process of

¹⁰ As recently as 1988, research into the process of internationalisation was described as an incomplete patchwork (Welch and Luostarinen, 1988).

internationalisation. Six decision sets, with their attendant literature, are identified: the decision to go offshore (as distinct from continuing to operate in the domestic market); where to go (i.e. which country); how to go (i.e. whether by exporting, foreign production or licensing); how to enter (i.e. joint venture, subsidiary, greenfield site etc.); how to manage the local operation; and finally, how to manage the network. Each area tends to be addressed in one or two quite discrete domains of the literature. Nevertheless, much of the work on one of the questions takes for granted the broadest level of received wisdom from another. Further, there is an implicit assumption of sequencing of the issues, that some decisions precede and in turn create the need for others. In the following section, a brief summary of the existing literature in relation to the decision sets, with a selection of references, is provided. Divergent behaviour in the observed foreign producers is also briefly noted.

1.4.1 Decision to go offshore

One of the first questions that arises in considering the internationalisation of a firm is what prompts the decision to expand into a foreign market rather than simply producing for domestic consumption. Most of the earliest explanations of the internationalisation of business lie within the economics literature, and focus primarily on competitive dynamics of the industry (Knickerbocker, 1963; Vernon, 1966; Kindleberger, 1969) rather than particular firms.

Research on this question at the firm level focuses primarily on export behaviour, rather than foreign production as the means of operating in foreign markets, and usually arises in the context of government interest in stimulating exports (Bilkey and Tesar, 1977; Dichtl, Leibold, Köglmayr and Müller, 1984). Empirical studies identify multiple considerations relating to the antecedents of export behaviour (Bilkey, 1978). Some researchers, who treat exporting as an innovation, enumerate a series of stages in committing to export behaviour.¹¹ Their models share many features but differ over whether exporting is initiated in response to an external “push”, such as an unsolicited

¹¹ Based on a model from the marketing field: Rogers' (1962) stages of adoption process.

order, (Bilkey and Tesar, 1977; Czintoka, 1982) or to an internal “pull”, such as the attitude of the CEO (Cavusgil, 1980; Reid, 1981). Other issues investigated include the relationship between size and exporting (e.g. Auquier, 1980), increasing commitment to exporting with growing export revenues (e.g. Williamson, 1990), and perceived obstacles to exporting (e.g. de la Torre, 1972).

For the observed Australian manufacturers, the first expansion into a foreign market was typically by foreign production rather than exporting.

1.4.2 Where to go

Several reasons are traditionally advanced in the economics literature for why organisations enter a particular foreign market and, therefore, implicitly prefer one market over another (de la Torre, 1972; Kogut, 1985a). One is to gain access to long-term, low cost factors of production, such as raw materials, labour and technology. Another is a search for assured markets for the high volume output that scale economies depend upon, and that are not available in domestic markets. A third reason is the opportunity for multiple stimuli to learning provided by the diversity of national markets.

Others researchers, such as Vernon and his colleagues (Vaupel and Curhan, 1973) have gathered data on the pattern of markets entered by MNCs. Most of the large scale studies that track and analyse the patterns of direct and indirect trade flows lie in the economics discipline, and do not address decision making processes within the firm itself. As Dunning (1979) points out, in the fifties and sixties the focus of these studies was the general economic impact of FDI on selected host and home countries, resulting in research that was bilateral and oriented towards the economic environment, rather than institutional. From the mid-sixties, the focus shifted towards the institutions (i.e. MNCs) that use FDI to penetrate national markets, with an emphasis on the divergent economic and social interests of host countries and those of the owners of FDI (e.g. Stopford, Strange and Henley, 1991).

The main body of work outside the economics literature that treats location as a decision taken by managers within a firm proposes the concept of psychic distance to explain internationalisation across country markets (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977, 1990). Psychic distance is defined in terms of factors that prevent or disturb the flow of information between firm and market, including differences in language, culture, political systems, level of education or industrial development (Johanson and Vahlne, 1977, p.24). Their hypothesis that firms would enter new markets with successively greater psychic distance has found some support, and the concept has been quite widely adopted (Davidson, 1980).

The observed Australian firms do not locate in foreign markets to gain access to low cost or assured supply of inputs.¹² Their foreign production is intended to service the local foreign market. Within that framework, the locational choice is often influenced by psychic distance.

1.4.3 How to go

A firm is conventionally considered to face a choice between exporting (trade), foreign direct investment (foreign production) or licensing as the best means for operating in a particular foreign market. This thesis addresses only the choice between the first two options.¹³

Two assumptions have general currency in the various literatures that address the question of the choice between exporting (trade) and foreign direct investment (foreign production). The first is that internationalisation is a process which moves inevitably in stages from simply exporting to a mix of exporting and foreign production. A related implication is that this movement towards being a full MNC is a natural progression, with such firms representing the full flower of international development (Welch and

¹² Pacific Dunlop's rubber products division is an exception. Pacific Dunlop is also one of only two conglomerates among the foreign producers.

¹³ Research into why firms engage in foreign direct investment rather than licensing (Caves, 1982; Hennart, 1982; Gatignon and Anderson, 1988; Shane, 1994), most of it in the economics paradigm, is therefore not directly relevant to this thesis.

Luostarinen, 1988). The second assumption is that exporting is preferable to foreign production (Root, 1977, p.11; Rugman, 1981, p.158). Sometimes implied and sometimes explicitly stated is the related assumption that the decision about how to go is influenced primarily by characteristics of a particular foreign market.¹⁴ Another major body of research that would sit in this cluster are the economics-based theories which explain the choice of the foreign production mode in terms of transactions costs. These concepts centre around the benefits of internalising trade among countries within the firm, given imperfect markets (McManus, 1972; Buckley and Casson, 1976; Dunning, 1977; Rugman, 1980; Hennart, 1982; Teece, 1983).¹⁵

The observed Australian firms consistently choose foreign production as their means of foreign market servicing across locations and time.

1.4.4 How to enter

Once the country has been selected, the issue of whether to engage in a joint venture, establish a subsidiary arrangement or start a greenfield site arises (e.g. Caves and Mehra, 1986). There is a substantial and growing literature about the possibilities of joint venture to provide opportunities for technology transfer and building new core competences (e. g. Harrigan, 1988; Kogut, 1988; Burgers, Hill and Kim, 1993).

The observed Australian firms adopt a variety of practices, both within and between firms, in relation to this issue.

1.4.5 How to manage the local operation

Much of the literature relating to how a foreign subsidiary is to be managed by the parent concerns a single business unit, rather than the corporate whole. One dimension, located primarily in the strategic human resources literature, addresses the “people” issues (Dowling and Schuler, 1990; Adler, 1992). These include whether the subsidiary would be or should be staffed, especially at the senior levels, by host country, parent country, or

¹⁴ A fuller treatment of this issue appears in Chapter 2.

¹⁵ Kogut (1985a, p.23) summarises the main themes in this field.

third country nationals (e.g. Perlmutter, 1969). Cross cultural issues are also considered to complicate the role of expatriate managers and headquarters-subsidary relationships (Hofstede, 1980; Hedlund, 1980; Caves, 1982). A second dimension addresses the control systems used to monitor and manage finance, sales and marketing and technical performance (Martinez and Jarillo, 1989). These issues tend to be studied in their separate disciplinary (functional) literatures.

The observed firms tended to establish a local management team (sometimes after an initial period), and to apply their existing management processes (financial and technical control systems) to the new acquisition.

1.4.6 Need to manage the network

By the time that the firm itself had become a focus of research attention, many of the large MNCs had come to be operating in multiple product and country markets. Accordingly, some scholars turned their attention to how the organisation as a whole managed its international activities, focusing on decisions and patterns and behaviours at the corporate level. Stopford and Wells (1972) were among the first to do so, studying the linkages between internationalisation strategy and structure at the corporate level. They proposed an evolutionary model of organisation structure (international, worldwide product, or area divisions, and finally matrix) determined by the levels of foreign product diversity and percentage of foreign sales. Egelhoff (1988) subsequently found that European and US multinationals made differing choices about structure as they internationalised.

It was only in the 1980s that attention was explicitly turned to questions about the overall strategy-organisational configuration at the corporate level for MNCs. Competitive pressures in a number of globalised markets highlighted the need to manage the contribution made by each national and product operation to an integrated network. In particular, it became apparent that firms needed to be able to capture the economies of scope and scale that come from being globally integrated while still being locally responsive in different national markets (Prahalad and Doz, 1987; Bartlett and Ghoshal,

1989). This research was grounded in organisational theory and drew particularly on Lawrence and Lorsch's (1969) work on differentiation and integration. In a similar vein, Hedlund (1986) proposed the hetrarchy as a description of the organisational aspects of competing through multiple centres and transferring learning throughout the network.

The observed firms were already operating an integrated network of dispersed production locations in Australia before they expanded offshore. This network was extended as they expanded. Thus their management of the network was part of their strategic agenda and formed a core competence at the beginning of the internationalisation process. For these firms, it was not a problem that needed resolution when they were well down the track internationally.

Before leaving this brief summary of the internationalisation research, it is also useful to distinguish between decisions faced by the firm at the business unit level and those at the corporate level. Most of the research takes a single product and a single foreign market as the level of analysis: the focus is the operations of a single product firm or a business unit of an MNC in a single foreign country. This is primarily the case for research into the initial decision to compete offshore, and decisions about where to go, how to go (i.e. by exports or foreign production), how to enter a specific market, and how to manage the local in-country operation. Less of the research addresses decisions taken by the firm at the corporate, rather than business unit, level (i.e. shifting the level of analysis from business unit to corporate strategy).

As mentioned earlier, each paper will include its own more focused and detailed literature review. However, the intention here has been to identify the overall patchwork of internationalisation research because most of the papers draw eclectically across issues that have historically been treated as separate, or linked in different ways.

The remaining two sections of the introduction now turn to outlining the research approach adopted for the thesis, and to providing a brief description of the research question addressed in each chapter.

1.5 Research approach

The research approach is influenced by the nature of the thesis, which represents the outcome of a process by which a set of unusual and unexplained findings triggered a series of field research and theory building activity. The research focus is on extending understanding of what appears to be a particular form of MNC that has not previously been the subject of specific or sustained research attention.

As a consequence, the thesis comprises a series of inter-related papers which present a cascading sequence of explanations for sequentially revealed gaps between observed data and existing theory. The papers represent an iterative process of observation and analysis, followed by inductive theory building, which includes a re-examination of prevailing theory and identification of new research questions, followed by further field research and subsequent inductive theory building. A reconciliation of competing theories is not attempted, nor is the aim to provide a complete explanation. Instead, the thesis sets out to begin the task of understanding critical aspects of the process of internationalisation as it relates to a subset of MNCs which operate primarily by foreign production. Accordingly, the papers are, at best, consistent with and complementary to each other, rather than tightly integrated across currently separate research questions and discipline domains.

The research stream comprising this thesis has an advantage of tractability that stems from two factors. The first is the small scale of the Australian economy, which makes it possible to conduct what is effectively a case study at the national level - there were fewer than 20 manufacturing firms with sales of over \$1 billion in 1988/89. Of this set of firms, ten represent the population of large Australian domiciled manufacturing foreign producers. These ten firms provide the evidence that is closely examined to provide a description of integrated foreign producers and to generate a new theoretical model.

It is important to acknowledge that, in studying successful large firms, the research is sampling on the dependent variable. While it has recognised shortcomings, this is a

common tradition for theory building research in the organisation theory field, and one that has generated highly significant theory contributions. The work of Burns and Stalker (1961) on organic and mechanistic configurations, and of Lawrence and Lorsch (1969) on differentiation and integration, for example, took this approach.

A second factor which gives tractability to the research in this thesis is the distinctive and focused character of the national portfolio of successful firms. These two factors together give the research a unique focus, and bring into sharp relief a set of issues that might be less readily apparent in a larger and more diverse economy.

As a result of the thesis' focus on exploring an unfolding sequence of data-literature gaps, the research methods employed vary across chapters, from field research to inductive theory building. Each paper represents a step in that process and addresses problems that emerge from the preceding research. Given this variation across papers, specific details of methodology are provided in each paper.

Adoption of a contingency approach does, however, provide a common underlying theoretical framework for the thesis.¹⁶ Such theories have dominated both the strategic management and organisation theory fields (Hofer, 1975; Steiner, 1979; Ginsberg and Venkatraman, 1985; Van de Ven and Drazin, 1985; Dess, Lumpkin and Covin, 1997). For example, Chandler (1962) found that as a firm's product or market strategy changed, the organisation's structure also changed to support implementation of the new strategy, while subsequent research by Rumelt (1974) and Channon (1973) showed that certain strategies required certain structures. The finding and recommendation that structure follows strategy are evident in the works of many in the strategic management, business policy and planning fields (Miller, 1987), including Ansoff (1965), Hofer and Schendel (1978), Miles and Snow (1978), and Porter (1980). Others have focused on the need for alignment between the strategy and the environment (e.g. Andrews, 1980; White and Hamermesh, 1981).

¹⁶ Although the particular application of the theory is developed in detail in each chapter as it is relevant, a brief synopsis of the core application of the construct is provided here in the introduction.

In the internationalisation field, Doz and Prahalad (1991) suggest that contingency theories are potentially the most powerful approach for understanding MNCs. A number of researchers have adopted such an approach. For instance, Stopford and Wells (1972) have been credited with extending Chandler's (1962) earlier strategy-structure model to include international strategy and structure (Galbraith and Nathanson, 1978). Later contingency-based internationalisation research argues that global strategies are required to exploit increasing growth in global interdependency across markets (Hout, Porter and Rudden, 1982). Still others argue that firm strategy needs simultaneously to take account of these pressures as well as increasing host government pressure for more national responsiveness, and develop an internal configuration to allow this to occur (Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989).

Although contingency theories vary widely in content, they share the common proposition that organisational performance is a function of the match or "fit" between two or more factors, such as organisational environment, strategy, structure, systems, culture and style (Van de Ven and Drazin, 1985; Fry and Smith, 1987). An implication of such theories is that there is no one best way to organise, and that any one way of organising is not equally effective under all conditions (Galbraith, 1973).

While researchers have used different conceptualisations of fit (Van de Ven and Drazin, 1985; Doty, Glick and Huber, 1993), this thesis adopts primarily a configurational approach, in which the variables of strategy, structure and environment interact on multiple dimensions to produce a coherent gestalt (Doty et al, 1993; Miller, 1986, 1996). The assumption is that organisations need to achieve fit both with their external environment and among their elements of structure and process (Burns and Stalker, 1961; Thompson, 1967; Lawrence and Lorsch, 1969).

The particular focus in this thesis is on the pattern of strategy, structure and systems for MNCs that operate primarily by foreign production. Its main concern lies with developing an understanding of the internal configuration, or internal fit, that allows a firm to

compete internationally by integrating across multiple production locations. Thus strategy here is being operationalised in terms of foreign market servicing behaviour; with foreign production as one such strategy, global exporting as another, and a mix of both at relatively high levels as a third.¹⁷

The choice between foreign production and exporting has been recognised in the economics-based literature on internationalisation as one of the crucial strategic decisions facing an MNC since Hymer's (1960) seminal work, and Egelhoff (1988) has suggested that foreign manufacturing is an important element for defining the strategic domain of MNCs. However, the implications of this choice at the individual firm level, particularly in terms of the internal configuration required for effective performance, have not been explicitly explored. The assumptions of contingency theory would lead one to expect that firms pursuing different strategies, (here construed in terms of different patterns of foreign market servicing behaviour) would require different internal configurations for effective performance.¹⁸

It is important to note that, in its emphasis on the internal configuration of foreign producing firms, the thesis takes an organisation theory or strategy process approach to understanding the existence and operation of the types of firms that were observed to dominate the portfolio of large Australian manufacturers. The environmental factors that make foreign production an appropriate strategy (or the question of external fit), are not a focus of the current research: the foreign market servicing strategy of foreign production is treated as exogenous. Another distinction that should be noted is that this research deals primarily with business unit, rather than corporate level strategy¹⁹ (Hofer and Schendel, 1978; Grant and King, 1982). The research question being addressed is how the firm is internally configured to compete effectively, through foreign production, in a chosen product market segment. This stands in contrast to the research of Stopford and Wells

¹⁷ Chapter 3 examines whether firm behaviour does differ in this way, using data on 443 of the world's largest industrial MNCs, drawn from Stopford's (1982) *Directory*.

¹⁸ This issue is developed in more detail in Chapter 4.

¹⁹ Most of the firms in the population originally studied have low product diversity, and can be described as being in food, drink, building materials, etc.

(1972), Egelhoff (1988), Kogut (1985a,b), Hedlund (1986), Prahalad and Doz (1987) and Bartlett and Ghoshal, (1989), which is conducted at the corporate level, and is more focused on issues related to managing effectively the set of businesses in which the organisation operates.

Contingency theory operates in each of the chapters in different ways, in some more centrally and explicitly than others. Its role and implications in each context are articulated more fully in each chapter. The research focus of each chapter is outlined in the final section below.²⁰

1.6 Structure of the thesis

A full description of the means adopted in the research for classifying firms is provided by Chapter 2. The schema allocates MNCs into four categories according to their pattern of foreign market servicing behaviour. One of the categories has minimal levels of international activity, the remaining three categories are global exporters, foreign producers and firms that engage in significant levels of both exporting and foreign production. The chapter traces the antecedents of measuring firm behaviour on these dimensions. It then details the nature of the gap between observed data and the literature that becomes apparent as a result of classifying firms in this way, showing how existing models do not address or explain the successful operation of firms that service markets

²⁰ The research presented in Chapters 2 - 6 is part of a major research program, in which the candidate has been actively engaged since its inception in data collection, analysis, theory development and writing. Chapter 2 develops and interprets ideas from several working papers co-authored with Yetton and Davis. Chapter 3 reports unpublished original research linked to but not part of that research program, for which the candidate is sole author. Chapter 4 develops an existing working paper (Yetton, P., J. Davis and J. Craig (1995) 'Redefining the multi-domestic: A new ideal type MNC', *AGSM Working Paper Series*, 95-016, Sydney. The candidate is primary author of Chapter 5, of which an earlier version appeared as Craig, J. and P. Yetton, (1997) 'The myth of the global renaissance manager'. In Thomas, H., D. O'Neal and M. Ghertman (eds.), *Strategy, Structure and Style*, John Wiley and Sons, Chichester, pp. 263-282. An earlier version of Chapter 6 was published as Yetton, P., J. Craig, J. Davis and F. Hilmer (1992) 'Are diamonds a country's best friend? A critique of Porter's theory of national competitive advantage as applied to Canada, New Zealand and Australia', *Australian Journal of Management*, 17(1), pp. 89-120. The candidate conducted or managed all field work including more than 100 hours of unstructured interviews with over 50 executives and was involved at all stages of the analysis and interpretation of this data.

primarily through foreign production. This suggests that there may be a need for an addition to the existing MNC models.

However, since the classification schema described in Chapter 2 had only been applied to firms from one country, it is necessary to ask what patterns MNCs from other nations would reveal if categorised on these dimensions. Therefore, Chapter 3 is an empirical paper which classifies 443 of the 500 of the world's largest MNCs identified in Stopford's (1982) *World Directory of Multinational Enterprises 1982-83* according to their pattern of foreign market servicing behaviour. This descriptive piece finds that the large MNCs do fall into the four categories - and that none of the other nations represented in that group show the same preponderance of foreign producers in their national portfolio as Australia does. However, it also shows that foreign producers make up a significant proportion (24.8%) of those firms world wide, and are the dominant type in several industries.

Contingency theory would suggest that the differences between an exporting or foreign producing strategy have practical implications in terms of internal design requirements for the firm. Thus the schema described in Chapter 2 and used in Chapter 3 to classify some of the world's largest MNCs is used to suggest there may be value in moving towards the theoretical development of a configuration for firms which adopt a foreign producing strategy. This is the focus of Chapter 4, which is a theory development piece that begins to devise an ideal type for the foreign producing MNC. It articulates the theoretical underpinnings of an organisational form for a strategy involving multiple production locations. The work lies in the organisation theory tradition, in which ideal types are intended as abstract models (Blalock, 1969), and "represent organizational forms that might exist rather than existing organisations" (Doty and Glick (1994, p.233). Thus although the insights gained from the field research into the observed firms provide understanding of the nature of the themes (Miller, 1996) and gestalt that might operate in a successful integrated foreign producer, the ideal type that is developed in this chapter would not provide a basis for categorising firms, or a description of existing ones.

The next chapter (Chapter 5) turns to a data-literature gap relating to international human resource management. It is an empirical and theoretical piece based on a field study designed to identify the skills Australian firms need for international operations, as a basis for determining appropriate training and other policy responses. The chapter uses the foreign market servicing schema to explain findings that appeared counter-intuitive in light of the existing literature. As such, it provides an example of the implications the research agenda described in the thesis has for other aspects of the internationalisation field.

The final chapter, six, returns to the context in which the phenomenon of integrated foreign producing firms first came to light, in considering the policy implications for government. It explores whether Porter's (1990) work on national competitive advantage is useful as a policy guide for governments if firms that follow a foreign producing strategy clearly create value, and the foreign producer has apparent legitimacy as an alternative way of competing in international markets. The chapter not only reviews Porter's (1990) original study but also in particular its applications to New Zealand and Canada, as described in *Upgrading New Zealand's Competitive Advantage* (Crocombe, Enright and Porter, 1991) and *Canada at the Crossroads* (Porter and The Monitor Company, 1991). The validity and relevance of these ideas for Australia are also discussed. The theory appears to be limited in its application and not well supported by the evidence from the two country case studies. The chapter suggests that there are problems in extending Porter's (1990) initial findings, which were based on the study of ten mature, manufacturing based economies, to resource-based and relatively less mature economies.

In conclusion, this thesis comprises a series of papers that explore a gap between observed data and the theory on internationalisation. In doing so, it ranges broadly and eclectically across a field that is diverse and fragmented. The primary contribution is to begin to expand our understanding of how some firms might compete internationally by coordinating dispersed production locations.

Chapter 2

The data-literature gap

2.1 Introduction

This thesis had its genesis in the observation that firms which engage in a high level of foreign production and undertake little exporting dominate the large-scale Australian manufacturing sector. That phenomenon was given striking visibility by the schema used to classify the manufacturers in an earlier study (AMC et al, 1990). The particular nature of the classification schema is central to the research agenda reflected in the thesis. Once MNCs are categorised in this way, and in particular, when attention is focused on how to manage foreign producing firms and sustain their success, it becomes evident that the existing internationalisation literature does not address or explain the behaviour of such firms. As such, the schema's use in the Australian context revealed a gap between the observed data on the behaviour of foreign producing firms and the internationalisation literature on how firms manage international operations. The gap in turn triggered the set of research questions addressed by the thesis.

Because the schema is central to the research, and because it has not been utilised or explained elsewhere,²¹ the first part of this chapter provides a detailed description of its dimensions, traces their antecedents in different areas of the internationalisation literature, and identifies the contribution that results from adopting this approach. The second part of the chapter articulates in detail the nature of the gap between the observed data and literature.

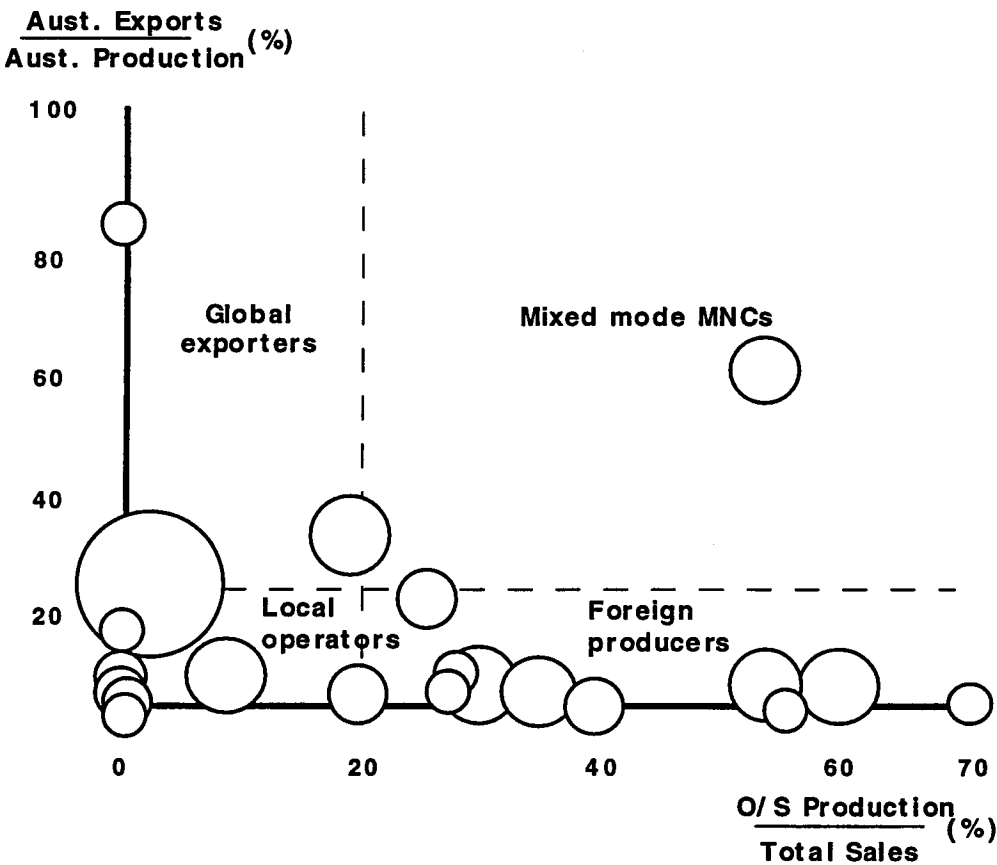
²¹ Exact parallels are not utilised in the literature, and the study (AMC et al, 1990) that originally devised the schema did not report the rationale for creating it.

2.2 Schema for arraying firms

2.2.1 Antecedents and contribution

The schema originally utilised to depict the population of large Australian manufacturing firms (Figure 2.1 below) has antecedents in economics-based research into patterns of foreign market servicing behaviour by multinational enterprises. The vertical axis is a measure of the relative importance of exporting in relation to domestic sales (Buckley

Figure 2.1: International behaviour of the large Australian-based Manufacturers*



Source: Based on Exhibit 7F, (AMC et al, 1990, p.134)

* (Sales > \$1 billion 88/89)
Note: Circle size represents 88/89 sales

and Pearce, 1981; Dunning and Pearce, 1981; Stopford and Dunning, 1983), often termed export propensity. The horizontal axis ratio, of foreign production to total sales, is the recommended indicator of the degree of multinationality of production (Caves, 1971). This measure is not often used, however, because data on foreign production, as distinct

from sales of foreign affiliates,²² are rarely available from public sources (Geringer, Beamish and daCosta, 1989). Instead, the ratio of overseas sales to total worldwide sales is the more commonly used measure of the degree of multinationality (Sullivan, 1994). Very few studies have conducted analysis using foreign production data. Those that have include Swedenborg (1979), Dunning and Pearce (1981), Stopford and Dunning (1983) and Buckley and Pearce (1984).

Combining the axes in the one schema (Figure 2.1) represents a twofold extension of these measurement and analytic techniques: an individual firm is taken as the unit of analysis, and a firm's levels of both exporting and foreign production are treated as a conjoint event. This contrasts with the dominant practice of reporting industry or national averages and of analysing the two ratios independently to identify trends in exporting or foreign production. That practice reflects the initial historical research interest of international trade scholars in aggregate patterns of trade and foreign direct investment (FDI)²³ activity (e.g. Vernon, 1966; Kindleberger, 1969). Although the research interest in international economics shifted in the seventies from markets to the theory of the firm and its pattern of behaviour (Dunning, 1979; Sullivan, 1994), studies of foreign market servicing have continued to report aggregated behaviour patterns (e.g. Hennart and Park, 1994; Sullivan, 1994).

2.2.2 Categorisation of firms

In turn, the schema represented in Figure 2.1 provides a system for classifying international firms according to their relative mix of exporting and foreign production. Four categories,²⁴ each representing a distinct pattern of MNC behaviour, can be identified, as in Figure 2.2 which more conventionally depicts the schema as a two by two matrix and labels the axes with summary terms: export propensity and multinationality of production.

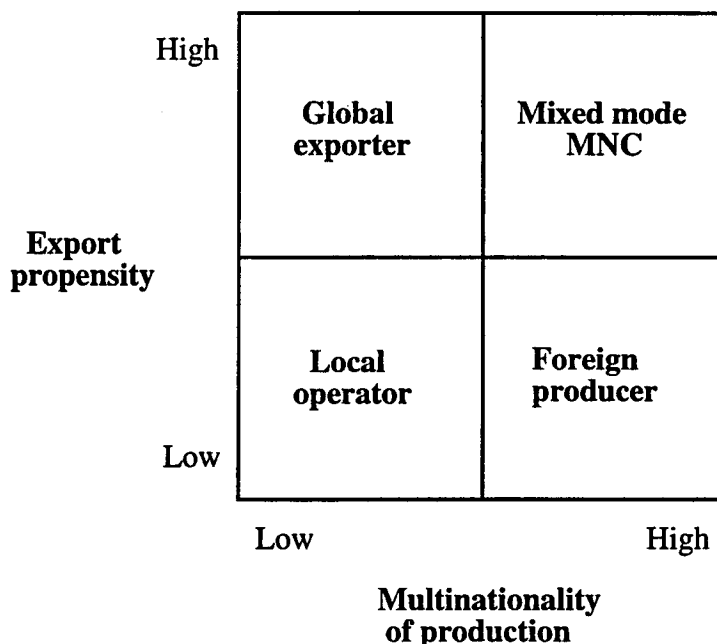
²² These may include the resale of internal exports.

²³ Often in the form of foreign production sites.

²⁴ The labels for firms types have been chosen to be as directly descriptive, rather than interpretative.

“Local operators”, in the bottom left quadrant have only limited exposure to foreign markets. “Global exporters”, in the top left quadrant, engage in high levels of exporting from home base and relatively little foreign production. “Foreign producers” undertake significant foreign production but little exporting from home base, while “mixed mode MNCs” have high levels of both.

Figure 2.2: Categorisation of MNCs



In identifying categories, the 20% cutoff point²⁵ for each axis that was used to classify Australian manufacturing firms in the original use of this schema (AMC et al, 1990, Exhibit 7F, p.134) is retained. Although any cutoff point to delineate “high” and “low” categories is somewhat arbitrary (Kobrin, 1991), a 20% threshold is consistent with both research practice and research findings in the internationalisation field.²⁶ For example, Ghoshal and Nohria (1993) choose a 20% cutoff point for their measure of forces for global integration.²⁷ Egelhoff (1988) excludes companies with less than 15% foreign sales as not sufficiently multinational, and Cavusgil (1980) defines export activity as

²⁵ Indicated by dotted lines in Figure 2.1.

²⁶ It also has parallels in the strategy field, where Rumelt (1974), for example, uses a 30% threshold for distinguishing between dominant product and single product firms.

²⁷ This uses Kobrin’s (1991) index of intra-firm trade as a percentage of total sales (this is a continuous variable).

“experimental involvement” where the proportion of total output exported “does not typically exceed 10%”. In terms of research findings, Buckley and Pearce (1984), analysing a sample of 156 of the world’s then largest enterprises, find that the average ratio of foreign production to total group sales is 22%; and that exports from the parent company as a proportion of parent firm production average 19%. Finally, Stopford and Wells (1972) identify three categories for relative importance of foreign sales (foreign sales²⁸ as a proportion of total sales): 0-20%; 21-39%; and over 39%. They find that none of the firms that had area divisions had less than 25% of their sales abroad, but that most of the firms with area divisions had more than 40% of their sales abroad. This could be interpreted as meaning that structural changes take place only once a threshold (25%) has been reached: in other words, a measure of materiality. This is relevant here because of the thesis’ focus on the set of decisions facing managers within a firm operating internationally. Therefore, the point at which an activity is material enough to become salient to a top management team, and result in action, is of interest.

The schema in Figure 2.2 also extends existing research practice by treating foreign market servicing behaviour as an MNC strategy, effectively by importing a set of measures from international economics into a strategy process approach to internationalisation. The schema’s contribution in this context is to focus attention explicitly on a relatively neglected dimension of a firm’s international strategy. The choice that it measures, between exporting and foreign production, has been recognised in international economics research as a significant strategic one since Hymer (1960), with a substantial body of work since then exploring the determinants of foreign production from the perspective of the MNC itself (e.g. Kindleberger, 1969; McManus, 1972; Buckley and Casson, 1976; Rugman, 1980; Rugman and Verbeke, 1992). However, it has not been explicitly adopted in other parts of the internationalisation literature. Egelhoff (1988) argues that foreign production is an important dimension of MNC strategy that has previously been neglected. For example, Stopford and Wells (1972), who examined the

²⁸ This measure of foreign sales includes exports, and excludes sales of foreign licensees and subsidiaries where the parent owns less than 25% of the equity.

implications of MNC strategy for structure at the corporate level, and whose research Egelhoff (1988) extended, used foreign product diversity and percentage of foreign sales²⁹ as the measures of strategy.

Using a quantitative measure of firm behaviour to operationalise firm strategy is consistent with Mintzberg's definition of strategy as "consistent patterns in streams of organizational decisions" (1979, p.25). Although it is difficult to measure decisions themselves, the trail of outcomes can reveal the pattern of a firm's strategy.³⁰ So, for instance, in this context foreign production as a high proportion of foreign sales would indicate a strategy of sourcing foreign sales from local manufacturing rather than from home base exports.

Examining the implications of these strategic choices for designing an organisation constitutes an additional extension of the existing literature provided by the thesis' utilisation of the schema in Figure 2.2. The research question it thereby addresses rests on a contingency assumption that different strategies require different internal configurations, each with a tight and distinctive fit with the chosen strategy (Miles and Snow, 1984; Van de Ven and Drazin, 1985; Miller, 1996).

The contingency relationship that is the focus here is the influence of the chosen strategy on organisational arrangements. This is only one of four major links in contingency relationships which involve strategy, the others being: influence of external environment on strategy (I); influence of organisational variables on the formulation of strategy (II), and influence of performance variables on the formulation of strategy (III) (Ginsberg and Venkatraman, 1985). This contingency link is also distinct from the one examined by Prahalad and Doz (1987) and Bartlett and Ghoshal (1989), for example, whose work addresses the implications of the external environment for organisational arrangements.³¹

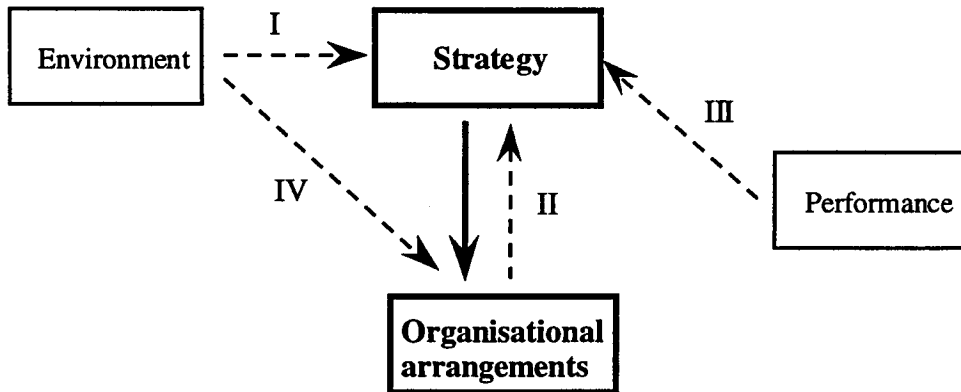
²⁹ This includes both export and foreign produced sales in one total.

³⁰ Studies by Stopford and Wells (1972), Franko, (1976), Daniels, Pitts and Tretter (1984) and Egelhoff (1988) have also measured outcomes rather than decisions.

³¹ As with Burns and Stalker's (1961) and Lawrence and Lorsch's (1969) work which examined the environment-organisational arrangements link, strategy is not explicitly part of the contingency linkage Bartlett and Ghoshal (1989) address.

Figure 2.3 below illustrates these different strategy-contingency links. The strategy/organisational arrangements link which is the research focus here appears in bold, while the remainder are identified by the Roman numerals that appear in the preceding text.

Figure 2.3: Strategy–contingency links



The underlying contingency premise suggests that the distinctions drawn in the classification schema (Figure 2.2) would be meaningful in terms of their implications for organisational arrangements. Specifically, an internal configuration of structure, management processes etc, that generated high performance for a firm pursuing an export-based strategy, would not be effective if applied to a firm engaging in either a foreign producing, or a mixed exporting and foreign producing strategy. Consequently, each category would require its own distinctive organisational arrangement or configuration.

When the national portfolio of large manufacturers was classified using this schema, the configuration required for effective performance as a foreign producer emerged as highly salient for the Australian manufacturing sector because of both their preponderance and the virtual absence of exporters or mixed mode MNCs. Figure 2.4 indicates the number of the large Australian manufacturers in each category.

Figure 2.4: Categorisation of large Australian-based Manufacturers

Export propensity	3	1
	7	10
Multinationality of production		

2.3 Gap between data and theory

The salience of foreign producers in this national context brought to light the comparative lack of research attention focused on managing such firms. The remainder of the chapter examines the nature of this gap between the observed phenomenon and existing theory.

One could speculate that the gap exists partly because defining MNC strategy on the combined foreign market servicing dimensions does not have direct precedents in the strategy based internationalisation literature, and partly because foreign producing firms have not so obviously predominated any set of MNCs previously studied. In any case, it is evident that the way the major paradigms in the strategy based internationalisation literature frame their research agenda either implicitly or explicitly downplays the possibility of firms of the type that were observed in the Australian context. Two of the main paradigms (Melin, 1992) that operate at the level of the firm, the stages model (Johanson and Vahlne, 1977) and the “process” school of diversified MNC management (Doz and Prahalad, 1991), implicitly minimise the probability of such firms as those observed. A third set of research, which focuses on national advantage for MNCs (e.g. Porter, 1990) explicitly suggests that such firms defy management capability. The nature

of these three dimensions of the gap between the observed data and literature is detailed in the remainder of this chapter.

Importantly, the intention is not to argue that the observed data calls into question the validity of existing models. Rather, the assumption is that the existing models are incomplete, in the sense that they do not account for the behaviour of all firms that operate internationally. In other words, the Australian data suggests there may be another category of MNC which has not been the subject of research attention; a category that has only come to light because such firms dominate the national portfolio of manufacturers. Whether such firms are a uniquely Australian phenomenon is examined in Chapter 3 and shown not to be the case. Indeed, such firms account for 24.8 % of a set of 443 of the world's 500 largest MNCs.³²

2.3.1 Evolution in foreign market servicing patterns

The first of the paradigms which implicitly questions the sustained viability of foreign producing MNCs is the Uppsala stages model of internationalisation (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977, 1990). It effectively defines the foreign producers quadrant (bottom right) as an empirically empty set. However, the observed data reveal that quadrant to be well populated by the large scale Australian manufacturing sector.

The conventional assumption about the path followed by a typical international firm as it grows is that movement towards being a "full MNC", engaging in high levels of both exporting and foreign production, is a natural progression; such firms are considered to represent the full flower of international development (Welch and Luostarinen, 1988). Becoming a mixed mode MNC is treated as an internationalisation process that inevitably moves in stages from simply exporting to a mix of both exporting and foreign production.

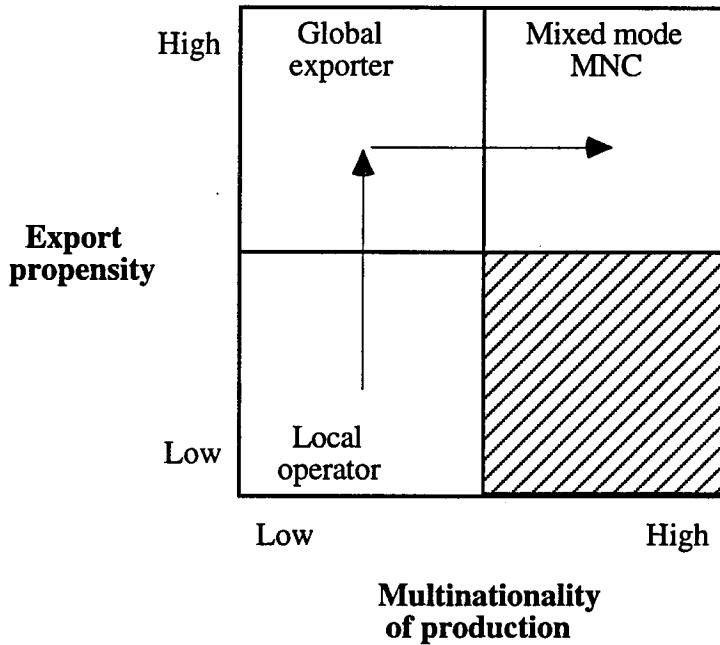
³² Data set drawn from Stopford's (1982) *World Directory of Multinational Enterprises, 1982-83*.

That dynamic is characterised as proceeding by the following route. A firm develops a distinctive competitive advantage, performs well and grows in the domestic market. At this stage it is often an import substitutor. It then becomes an opportunistic exporter, typically operating overseas through sales agents in other countries. In this initial exporting phase, domestic consumption remains the primary focus of production. Exports are used to take up any over-capacity, but would not disrupt supply to domestic customers.

As it continues to grow, the firm then becomes a strategic exporter, investing to produce specifically for overseas markets. A distribution system, comprising a number of sales offices in the export markets, is established at this point to reflect the central place of exporting in the firm's strategic agenda. Both the cost and the nature of a sales office network reflect this change. The set up costs are significant and require that the firm has reached a certain minimal scale to be willing to consider the investment. The shift is also echoed in the transition from the more temporary and lower cost agency arrangement, which can be terminated at any time with minimal financial penalty to the firm. The final step in this progression to being a full (mixed mode) MNC is to establish production locations in other countries – either as a regional export centre or to service particular markets that may, for instance, be otherwise inaccessible because of tariff or other barriers.

This growth path can be depicted on the schema used here as a route travelling from local operator, through global exporter and thence to mixed mode MNC (Figure 2.5). This trajectory has both theoretical and empirical support within two areas of the internationalisation literature, which each propose different mechanisms as underpinning the dynamic. One is based on descriptive case research into the behaviour of four Swedish firms (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977, 1990). The authors found and propose that, over time, a firm will progress through four

Figure 2.5: Path in stages model



stages in any single overseas market. These are 1) no export activity; 2) export through agents; 3) establishment of an overseas sales subsidiary; and 4) foreign production/manufacturing units. Thus, in the Uppsala stages model of internationalisation, the strategic choice between exports and foreign production can be characterised as implicitly contingent on time engaged in a foreign market. Subsequent research has provided supporting evidence for this stages model (Bilkey, 1978; Cavusgil, 1980; Johanson and Nonaka, 1983; Denis and Depelteau, 1985).

The other body of research underpinning the assumption that a firm operating internationally will progress to being a fully-fledged (i.e. mixed mode) MNC lies in the economics-based literature. Complex models for calculating the optimal entry mode³³ are provided, sometimes containing an implicit premise that exporting is preferable to foreign production (Root, 1977, p.11; Rugman, 1981, p.158). They take account of factors such as normal costs of producing the good in the home country and in the host country, export marketing costs (e.g. insurance, transport and tariffs), additional costs to foreign

³³ See, for example, Rugman's (1981) chapter 3 discussion.

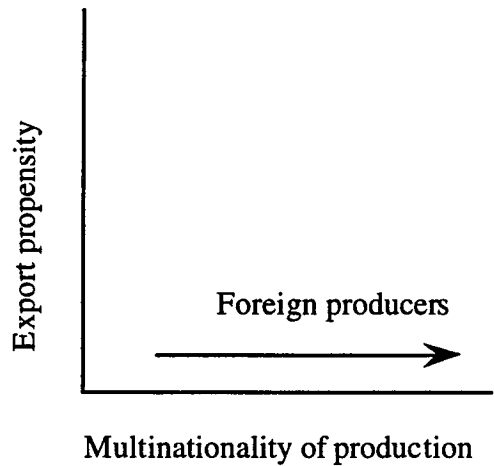
firms operating in that country (e.g. environmental, cultural and political information costs) and the knowledge dissipation costs associated with the risk of compromising the firm specific advantage if a licence is granted. Additionally, empirical research into the behaviour of MNCs shows companies shifting from exporting to foreign direct investment in response to changes in import tariffs and quotas in order to develop or preserve the foreign market, and in response to the appearance of local or third country competitors in the foreign market (e.g. Root, 1977, p.11). The implication of these models and research is that, over time, a firm operating in a number of countries will find itself engaging in both foreign production and exporting - in other words, operating as a mixed mode MNC.³⁴ It is the balance between exporting and foreign production that is considered problematic³⁵ and not their joint presence, which is taken as a given.

By contrast, the data on Australian manufacturing firms that appears in Figure 2.4 implies that the majority have consistently chosen to engage in foreign production, regardless of the national market entered. Furthermore, updated information gathered from these firms indicates that the trend is for them to increase their levels of foreign production, and maintain static, low, export levels (Yetton and Craig, 1995), although some studies report what is described as “leapfrogging” of intermediate stages (Hedlund and Kverneland, 1984; McKiernan, 1992). They can therefore be represented as a group which is moving along the horizontal axis, as shown in Figure 2.6. As these firms become increasingly successful they continue to expand and penetrate foreign markets by overseas production. This internationalisation process therefore diverges from that observed and described by the existing literature.

³⁴ The theoretical possibility of foreign producing firms is not excluded within this literature, which acknowledges non-tradeable goods. But foreign producing firms, or industries which are non-tradeable, have not been treated as interesting in themselves.

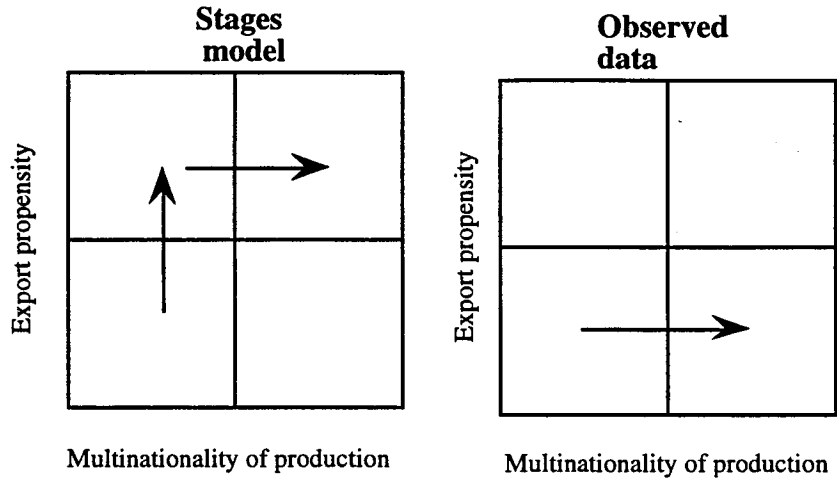
³⁵ In general exporting is seen as preferable - and foreign production as a phenomenon which potentially destroys economies of scale or scope.

Figure 2.6: Dynamic Path of Australian Manufacturing Firms



This first dimension of the gap between the observed Australian data and the existing literature is stylised in Figure 2.7. It highlights that the foreign producer category would be a null set under the Swedish model of the internationalisation process and that, by contrast, the process followed by the observed Australian firms populates that category. It therefore seems likely that the Australian firms are following a different path than the conventional one articulated and supported in the stages literature, a path which must be underpinned by a different strategic logic.

Figure 2.7: Literature-data Gap: Stages of Internationalisation



2.3.2 Configurational models of MNCs

The finishing point of the stages model in turn provides the stepping off point for identifying the second dimension of the data-theory gap that comes to light as a result of focusing on the observed foreign producing manufacturers. Through the processes identified in the stages model, many US and European-based multinationals had become “mixed mode MNCs” by the seventies, not only engaging in high levels of exporting from home base but also undertaking foreign production in a number of countries, often as product diversified firms. The internationalisation research that is primarily based in organisation theory proposes models for the internal configuration of such firms (Perlmutter, 1969; Stopford and Wells, 1972; Egelhoff, 1988) often to allow them to capture economies of scope and scale globally (Kogut, 1985a; Hedlund, 1986; Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989). That research addresses the problem of how to manage firms in the top right quadrant (mixed mode MNCs) of Figure 2.2. The focus is on managing and benefiting from the complexity involved in the mixed mode of foreign market servicing.

Among the first scholars to address how the organisation as a whole managed its international activities through decisions, patterns and behaviours at the corporate level were researchers from the organisational behaviour and organisation theory fields. Perlmutter (1969) proposed that a firm’s world view determined whether its approach to management processes and structuring of world-wide activities was geocentric, polycentric or ethnocentric. Other early researchers included Stopford and Wells (1972), who studied the linkages between internationalisation strategy and structure at the corporate level. They proposed an evolutionary model of organisation structure (international, worldwide product, or area divisions, and finally matrix) determined by the levels of foreign product diversity and percentage of foreign sales.³⁶ In contingency

³⁶ In an extension of their research, Egelhoff (1988) subsequently found that European and US multinationals made differing choices about structure as they internationalised. Other research found that US firms in particular retained an international division after their combination of geographic and

terms, this research would be characterised as addressing aspects³⁷ of the strategy - organisational arrangements link in Fig. 2.3.

It was only in the 1980s that attention was explicitly turned to the overall strategy or organisational configuration required at the corporate level for MNCs. In the strategy content domain, a range of global strategy prescriptions was advanced, most arguing the need to coordinate and rationalise the flow of components and final products within the world-wide system. This work could be described as dealing with the environment-strategy contingency link (link I in Fig 2.3).

In a paper proposing a framework for global strategy, Ghoshal (1987) identifies several such prescriptions. Hout, Porter and Rudden (1982) argue global strategists must use a variety of industrial organisation based strategies: economies of scale and scope, and the creation of pre-emptive positions through quick and large investments. For their part, Hamel and Prahalad (1985) advocate “global chess” - drawing on a broad product portfolio that permits the sharing of distribution channels and technology investments and cross-subsidisation across markets. Finally, Kogut (1985a) argues for flexibility (e.g. multiple sourcing, moving production to capture altered factor costs and exchange rates) and arbitrage to exploit imperfections in financial and information markets.³⁸ All these prescriptions share the assumption that single dimension strategies, such as country-centred or centralised global approaches are not sustainable competitively. Instead, they advocate techniques for managing and capitalising on coordinated multi-product, multi-country portfolios.³⁹ In this sense, these strategy models advance prescriptions for firms in the “mixed mode MNC” quadrant.

product diversity would have suggested a different structure, and that matrix structures, those advocated for firms high on both dimensions, were rare (Daniels, Pitts and Tretter, 1984).

³⁷ E.g. “strategy-structure”; “strategy-culture”. The “strategy-organisational arrangements” link covers a range of bilateral “strategy-single function” linkages, as well as the strategy-overall configuration link which is the focus of this thesis.

³⁸ In a companion paper (1985b) he explores the firm’s capability to exploit these opportunities from the firm’s internal organisational perspective.

³⁹ The fourth of the prescriptions Ghoshal (1987) identifies however, advocates a simplification of operations, through product standardisation, as the key to global strategy. This approach derives from the marketing field (Levitt, 1983), and rests on the assumption of global convergence of consumer tastes as the global village becomes a reality. It is more akin to Porter’s (1990) later preference for

Organisation theory scholars have also addressed the question of how diversified multinational corporations might coordinate and optimise the contribution made to an integrated network by each national and product operation, in the face of increasing global competition. In their research on MNCs, these scholars consistently emphasise the environmental complexity faced by such organisations - in particular the contingencies created by operating in multiple national environments, each with their own local customs, governments, consumer preferences and regulatory agencies, as well as by the need to manage linkages across national boundaries⁴⁰ (Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989; Doz and Prahalad, 1991; Ghoshal and Westney, 1993).

The dominant stream of research draws particularly on Lawrence and Lorsch's (1969) work on differentiation and integration, and is represented most prominently by Prahalad and Doz (1987) and Bartlett and Ghoshal (1989). The latter propose and articulate the transnational form of organisation as the best configuration for firms that face simultaneous pressures for global integration and local responsiveness (Bartlett and Ghoshal, 1989). They explicitly argue that, although MNCs faced a single dominant strategic demand in the past, they must now have the capacity for simultaneously managing global integration, local responsiveness and world-wide learning. Their research focus is particularly on how to develop and manage the organisational capability to devise and implement the complex global strategies that these industry forces require. The "transnational" form is put forward as the solution to this problem, implicitly treated as the most highly evolved form of MNC: *"Today, no firm can succeed with a relatively unidimensional strategic capability that emphasises only efficiency, or responsiveness, or leveraging of parent company knowledge and competencies. To win, a company must now achieve all three goals at the same time. With the multidimensional strategic requirements, these businesses have become transnational industries."* (Bartlett and

concentrating production at home base than to the three other prescriptions, which are concerned with ways to benefit from the product and geographic diversity.

⁴⁰ Hedlund's (1986) work, proposing the hetrarchy as a description of the organisational aspects of competing through multiple centres and transferring learning throughout the network also takes as its focus firms in the mixed mode MNC quadrant.

Ghoshal, 1989, p.25). This work can be characterised as addressing the environment-organisational arrangements contingency link (link IV in Figure 2.3).

For completeness, these researchers identify four categories of firm types, represented in Figure 2.8. Each corresponds to different combinations of industry forces: “global” firms which face strong forces for global integration and weak pressures for local responsiveness; “multinational” firms which have strong forces for local responsiveness and little pull to global integration; “international” firms which have weak forces for both, and “transnational” firms which respond to strong forces for both. Indeed, part of their argument is that simultaneous high pressures for both global integration and local responsiveness are inevitable in all industries, requiring the adoption of the transnational form. Implicitly then, in time all MNCs need to become transnationals. Importantly, the focus of their research and theory is primarily the characteristics of successful transnationals. The other three types, which complete the general schema, are not addressed in detail in Bartlett and Ghoshal’s (1989) research and recommendations.

**Figure 2.8: Bartlett and Ghoshal’s categorisations
“The Environment of MNCs”**

Forces for Global Integration	Strong	Global	Transnational
	Weak	International	Multinational
		Weak	Strong
		Forces for Local Responsiveness	

Source: Adapted from Figure 2, Ghoshal and Nohria (1993)⁴¹

⁴¹ This figure is used because it provides a simpler representation of the four categories used. Bartlett and Ghoshal’s complete categorisation schema (1989) includes a third dimension - forces of world-wide

To explore fully the issue of whether the above literature (for example Bartlett and Ghoshal, 1989) explains the behaviour of the foreign producer, one would first need to map the Bartlett and Ghoshal matrix (see Figure 2.8) onto the schema developed here (see Figure 2.2); identify which typologies map onto the foreign producer cell; and examine the implications of these typologies for managing foreign producers. This would be complex given differences in the vertical axes of the two matrices. However, if it is accepted that the focus of the research, theory development and recommendations in this literature on complex MNCs is the effective management of the transnational, then this complex mapping problem is simplified to one of showing that the observed foreign producers do not map onto the only quadrant of the matrix (transnational) which Bartlett and Ghoshal's (1989) recommendations address.

The horizontal axes have a degree of equivalence between Figures 2.2 and 2.8, in the sense that a high degree of multinationality of production would often be the consequence of high pressures for local responsiveness. This argument is also made in the economics based theories addressing the benefits to the firm of engaging in foreign production rather than exporting (e.g. Dunning's eclectic theory [1973]; Rugman's Internalization approach [1980]). Advertising to sales ratio is the proxy commonly used to measure forces for local responsiveness, both in that literature and by Bartlett and Ghoshal (1989), who also utilise the average value of the extent of local regulations. So, an inspection of the literature would locate the foreign producers in the right hand portion of Figure 2.8.

The situation is more complex with respect to the vertical axes which measure two very different dimensions. Determining correspondence between the vertical axes of the two schemas is further complicated because the measures Bartlett and Ghoshal (1989) use operate at the industry rather than firm level. However, Bartlett and Ghoshal (1989) use a proxy measure (R&D intensity) for industry forces for global integration. Later research within the same stream (Ghoshal and Nohria, 1993) utilises Kobrin's (1991) index of

learning. Their "global" and "multinational" firms are defined in the same way; their "transnational" faces the additional pressure for integrated innovation, and their "international" firms are those that focus on integrated learning with less local responsiveness than the "multinational" exhibits.

integration, which is a ratio of the total intra-firm trade (sum of affiliate to affiliate, affiliate to parent and parent to affiliate sales) to the total international sales (sum of total sales of parent and all affiliates) of all the MNCs in an industry. The higher the index of integration, the stronger the forces for global integration. This index provides similar industry rankings to those obtained by R&D intensity.

The extent to which firms within an industry have chosen a strategy which provides integration, as measured by intra-firm trade flows or R&D intensity, is captured by an average measure for that industry. A firm belonging to that industry will accordingly be assigned to that portion of the axis. Therefore, the actual strategy of an individual firm is not measured by the vertical axis, nor reflected in the schema.

An additional complication is that the measure of industry pressures for global integration acts only indirectly on individual firms: pressures within an industry for integration of activities call for integration and coordination strategies. In Bartlett and Ghoshal's schema, these strategies are not articulated. Instead, the research focus is on identifying the organisational form that would be a good fit for an environment that required integration and coordination. Thus the contingency link these researchers examine is the one numbered IV in Figure 2.3. By contrast, the vertical axis of the schema used for the thesis (Figure 2.2) measures,⁴² and therefore permits classification on the basis of, enacted firm-level strategy for servicing foreign markets. The contingency link examined is a direct one: strategy-organisational arrangements.

Putting to one side these issues, it is nevertheless possible to determine where the observed Australian firms might be at first blush located on the vertical axis of Bartlett and Ghoshal's schema, by identifying the average R&D intensity and/or index of integration for the industries in which they operate.⁴³ The observed Australian firms operate in industries (e.g. food, drink, building materials, transport services) which rank

⁴² It uses the proportion of a firm's home base production that is exported, which is a direct and uninterpreted measure.

⁴³ R&D intensity correlates highly with exports.

low on both these measures of forces for global integration. Thus they would not be allocated to the transnational category in Bartlett and Ghoshal's schema. Contingency theory indicates that the model those authors articulate in detail for managing transnationals would shed little light on the organisational arrangements required by a foreign producer strategy. The Australian firms would be consigned to the multinational category, for which description, analysis and configurational advice are not provided.

It should be noted finally that attempting to locate the Australian foreign producers on Bartlett and Ghoshal's schema reveals an interesting issue. The process outlined in the preceding paragraphs results in assigning the foreign producers to the "multinational" category, in which there are apparently high forces for local responsiveness and low industry forces for global integration. However, field research into the Australian foreign producers revealed high levels of integration of management and technical processes globally, combined with high local responsiveness. Thus their organisational configuration delivers the performance a transnational configuration should confer. But the firms would not meet the criteria for inclusion in that category. Additionally, the organisational arrangements that deliver this outcome are quite different from those described for the transnational form. The knowledge base and learning of the observed Australian firms are embedded in process rather than in product. The existing measures for integration assume that they are embedded in product, and that global integration, which entails cross border knowledge and learning flows is therefore best captured by cross border product flows. It should be noted that Kobrin (1991) does acknowledge the availability bias of measures for product flows and regrets the lack of measures for process flows.

2.3.3 Global exporters and national competitive advantage

In contrast to those who research configurations for managing diversified MNCs, other researchers contend that competitive advantage accrues to global exporting firms, because they do not face complex coordination problems, and thus are best able to capitalise on

economies of scale, both in production and R&D. They are also considered to deliver benefits to the host government in terms of a favourable balance of trade and generation of domestic employment. This latter perspective is consistent with the argument that many of the world's large MNCs had been forced after World War II to disperse their production locations in a way that compromised the economies of scale they could otherwise have expected from the larger markets to which their geographic expansion gave them access.⁴⁴ Particularly in the face of competition from strong Japanese firms, many of whom were global exporters in the 1970s and early 1980s, the mixed exporting/foreign production mode appeared sub optimal. Porter's global strategy framework (1986, 1990) is representative of this stream of research. He proposes a model premised on the view that national competitive advantage depends on the existence of domestic market conditions that support global exporters. As mentioned earlier, he explicitly suggests there is a low probability of firms of the type that were observed: integrated foreign producers. This constitutes the third dimension of the data-literature gap being identified in this chapter.

Porter's (1990) research focus is the source of a nation's competitive success. The underpinning logic is that the home nation influences the ability of firms in an industry to build and sustain competitive advantage; in turn the national economy's health and capacity to progress are determined by the outcome of myriad competitive battles in individual industries. In these battles, the core source of competitive advantage is the ability to innovate. His theory of the determinants of national competitive advantage specifies the characteristics of the home market which optimise that capacity for firms within an industry. While his focus is at the industry level, Porter's arguments rest on existing theories of competitive advantage from the strategy and industrial organisation

⁴⁴ For instance, Stopford and Dunning (1983, p.23) write *"Bretton Woods and Havana provided the economic underpinnings for the pattern of post-war international commerce and resource allocation; yet import controls, a shortage of foreign currency in host countries, and a desire of many countries to build up indigenous manufacturing capabilities, forced firms (particularly American ones) to service their foreign markets through local production rather than through exports."* An exception is where the firm's purpose in engaging in foreign production is to gain benefit from differential factor endowments, such as unique supply of raw materials or low wage rates, in different parts of the world.

fields. These relate to strategy at the business unit level.⁴⁵ In contingency terms, this could be described as a strategy-environment link, in which the chosen strategy (innovating global exporter) requires the appropriate configuration of certain environmental factors - in this case, characteristics of the national industry, expressed on the five dimensions that make up Porter's "diamond" of competitive advantage.

Porter's (1986, 1990) framework for global competition is relatively closely related to the foreign market servicing behaviour schema. Accordingly, the treatment of firms of the type observed in the Australian manufacturing sector can be directly identified in his work. Both axes of his framework identify a dimension of firm, rather than industry, behaviour: configuration of activities, either concentrated or dispersed on the horizontal axis; and coordination on the vertical axis. The combination of these determines type of international strategy to be adopted by the firm, as represented in Figure 2.9, below.

The category of firm behaviour that forms the descriptive and prescriptive focus for his theory of national competitive advantage is the top left quadrant (simple global strategy) in this framework. It equates to the top left quadrant (global exporter) in the foreign market servicing behaviour schema (Figure 2.2). The framework explicitly categorises foreign producing firms, according to the level of coordination between subsidiaries. In this way, Porter acknowledges the theoretical possibility of firms of the type observed among the Australian manufacturers.⁴⁶ However, he argues that, in practice, there is a low probability that this set will be occupied.

⁴⁵ In this, it is similar to the focus of the thesis and the stages model research, but contrasts with the work on organisational configuration for diversified MNCs which addresses corporate level strategy.

⁴⁶ This dimension of the data-literature gap draws on field research observations (Yetton et al, 1992) that the Australian foreign producers are globally integrated across their separate production locations. This information is additional to that captured in the schema in Fig 2.2.

Figure 2.9: Porter's categorisation of global strategies

Coordination of activities	High	Simple global strategy	High foreign investment with extensive coordination among subsidiaries
	Low	Export-based strategy with decentralized marketing	Country-centred strategy by multinationals or domestic firms operating in only one country
		Geographically concentrated	Geographically dispersed
Configuration of activities			

Source: Adapted from Porter (1986, p.28), Figure 1.5

Porter considers that geographically dispersed (multi-country) configurations pose extreme coordination problems which are almost always damaging to performance. He recognises that the global configuration for locating each step of the value chain may lead to its dispersion, especially in some industries. He also accepts the logic that learning may occur and be transferred: "If a firm learns how to operate the production process better in Germany, transferring that learning may also make the process run smoother in US and Japanese plants" (Porter, 1990, p.58). However, he argues that this is not the normal course of events: "Even when there are significant benefits to coordination, however, achieving coordination among subsidiaries in a global strategy involves formidable organizational challenges because of sheer complexity, linguistic differences, cultural differences, and the need for high levels of open and credible information exchange ... The German branch does not necessarily want to tell the US branch about their latest

breakthroughs in production technology because it may make it harder for them to outdo the Americans in the annual comparison of plant operating efficiency. These vexing organisational problems mean that country subsidiaries often view each other more as competitors rather than collaborators ..." (Porter, 1990, pp.59-60).

In this way, Porter (1986, 1990) effectively dismisses the foreign producing firms as at best a transitional form in the world of global competition. The top right quadrant in his framework, which the foreign producers observed in Australia would occupy, is a set that might be occupied only briefly, with firms inevitably migrating to the bottom right quadrant. Importantly, however, integrated dispersed operations are distinguished, at least theoretically, from multidomestic firms which simply have a portfolio of stand alone, country-centred operations. In effect then, Porter's framework clearly identifies that there may be at least two types of strategies and, therefore, firm configurations associated with servicing foreign markets primarily through foreign production.

So, it is possible both to locate the observed Australian manufacturing firms that engage primarily in foreign production and coordinate across the dispersed locations against Porter's classification and conversely, to map Porter's dominant local firm strategy, the simple global strategy, into the upper quadrant of the matrix presented in Figure 2.2. The issue here is not what Porter does to recognise the theoretical possibility of the foreign producer but is rather that he tends to dismiss this type of firm: a firm type that becomes highly salient as a feasible form of organisation when observing the Australian data set.

2.4 Discussion

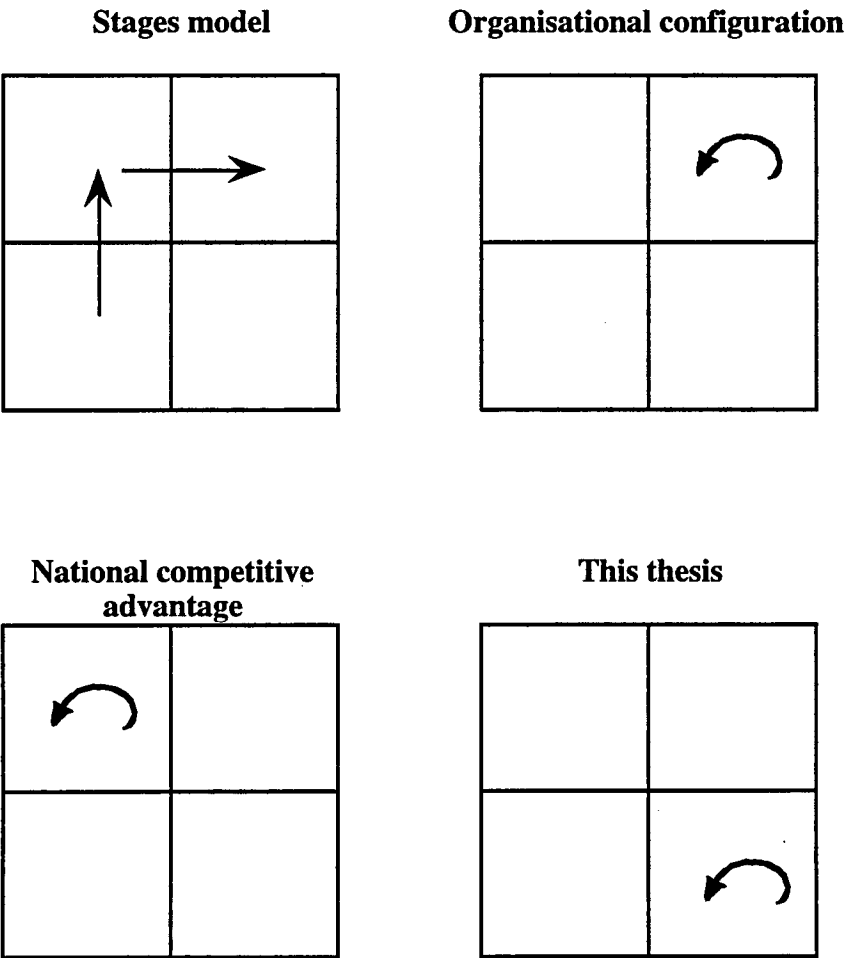
Three dimensions of a gap between the observed data and the existing internationalisation literature have been identified. The stages models imply that the foreign producer category in the foreign market servicing behaviour schema would be an empty set. The observed firms show that it is populated at least in the Australian manufacturing sector, and raise the question of whether that is also the case in other countries. Chapter 3 treats this as an empirical question.

Additionally, models from both organisation theory and strategy/IO do not provide guidance on how to manage or best support firms in the foreign producer category. Organisation theory models on how to manage MNCs focus on firms in the “mixed mode MNC” category of the foreign market servicing behaviour schema (Figure 2.2), providing arguments about the benefits of the transnational form that have strongly influenced both managers in MNCs and subsequent research. However, these recommendations do not extend to how to manage other categories of MNCs, including foreign producers, to compete effectively in global markets. Finally, taking a strategy/IO perspective, Porter (1990) provides a powerful rationale for the potential competitive advantage of the global exporting category in the schema but is largely silent on descriptions or prescriptions for foreign producers. Additionally, although he recognises the theoretical possibility of coordinated foreign producers, he inclines to the view that this subset of the foreign producer category will be empty in practice.

The distinctive, and complementary, focus of the thesis is thus illustrated in Figure 2.10 below, which provides a stylised representation, in terms of the foreign market servicing behaviour schema, of the existing literature and the focus of the thesis. The looped arrows indicate the quadrant, and thus pattern of foreign market servicing behaviour, that is the primary focus of research interest.

Figure 2.10 highlights the neglect in the current literature of firms such as those in Figure 2.1 that compete as foreign producers. The next chapter, which explores the incidence of such firms beyond the Australian context, finds that they exist in significant numbers among the world’s largest MNCs. In turn, Chapter 4 accordingly sets out to provide a theoretical rationale for a strategy-organisation configuration for coordinated foreign producing firms. This ideal type competes in quite different ways than those identified in existing MNC frameworks.

Figure 2.10: Locating the thesis against the literature



Chapter 3

The foreign market servicing behaviour of large multinational enterprises: An empirical investigation

3.1 Introduction

The preceding chapter argues that the existing internationalisation models in the strategy process field neither account for MNCs which choose to serve foreign markets primarily by foreign production nor provide guidance on organisational configurations for them. This strategy is assumed to be either an early, and thus transitory, phase of a firm's internationalisation process, or an unsustainable strategic choice because competitors are moving inevitably towards globally integrated strategies. However, these assumptions do not hold for the foreign producers that dominate the Australian portfolio of large manufacturers. Understanding how to manage such firms is salient in the national industry policy context. Focusing on them brings to light the apparent gap between existing literature and observed data which forms the central research theme of the thesis. The existence of that gap raises the question of generalisability of the observed data beyond the Australian context. The question is whether such firms are confined to Australia and simply a national phenomenon, or alternatively, represent a relatively neglected subset of MNCs. In reply, this chapter shows that, rather than being a unique Australian phenomenon, foreign producer firms account for 24.8% of large MNCs world-wide.

In order to explore the question of generalisability, the classification schema which brought to light the phenomenon of foreign producing firms is applied to an international population of large MNCs: 443 of the world's 500 largest multinational enterprises in 1981, as identified in the *World Directory of Multinational Enterprises 1982-83* (Stopford, 1982). This is the same source from which Bartlett and Ghoshal (1989) drew

their sample of firms for detailed headquarters and subsidiary analysis. The analysis indicates that the foreign producer pattern of behaviour for competing internationally is not a uniquely Australian phenomenon, nor one that is confined to small international players. Such firms occur across countries and industries, as well as predominating in some industries. A summary conclusion that may be drawn is that foreign production centred strategies and organisational requirements are material for a significant subset of MNC managers.

In classifying a population of firms, the chapter takes a taxonomic approach, examining whether the identified dimensions of foreign market servicing behaviour hold up across other populations. This represents a form of replication with extension (Galtung, 1967; Hubbard, Vetter and Little, 1998). While the analysis undertaken here is not predictive or testing a causal model, it does examine three propositions. The first concerns the existence of large foreign producing MNCs in significant numbers domiciled outside Australia. This proposition relates to the generalisability of the data beyond a single national context, and is integral to defining the dimensions of the literature-data gap which forms the core of this thesis. The second proposition concerns country differences in firm choices of foreign market servicing strategy, and the third addresses industry differences. These two additional propositions are derived from the existing literature, which shows evidence for both country and industry differences in aggregated patterns of foreign market servicing behaviour, but does not examine firm strategy in these terms.

3.1.1 Propositions

The mainstream view that foreign producing is an early stage or an uncompetitive international strategy has evolved from internationalisation research grounded in the observation of European and US MNCs. As outlined in Chapter 2, the strategy and organisation theory research into MNCs has either global exporters or mixed mode MNCs as its primary focus. In that literature, foreign producers are a comparatively neglected set - either implicitly or explicitly excluded from research attention.

On the one hand, the stages model of internationalisation describes a trajectory that culminates in becoming a mixed mode MNC, and bypasses foreign producing as a consistent means of serving foreign markets. On the other hand, the researchers who make reference to firms that service foreign markets primarily by foreign production⁴⁷ assume that they adopt a multidomestic strategy, which entails a portfolio of separate national businesses (Hout, Porter and Rudden, 1982; Yip, 1992). This is equivalent to the locally responsive but not globally integrated sector of the schemas developed by Prahalad and Doz (1987) and Bartlett and Ghoshal (1989). That mode of operating is considered vulnerable to a coordinated global strategy. The solution advocated in the strategy process literature, which focuses on complex diversified MNCs (i.e. mixed mode MNCs), is for firms to be both globally integrated and locally responsive (e.g. the transnational form).

In contrast, Porter (1986, 1990), who conceptualises international competition in terms of concentration or dispersion of production and coordination, does acknowledge the theoretical possibility of coordinated foreign producers, but questions managerial capability to coordinate dispersed production. His advocated solution for MNCs, which is offered in the context of identifying the national economic conditions conducive to sustaining global exporters, is for such firms to become global exporters, concentrating production at home base.

These conventional views imply that, as a strategy for large MNCs, foreign producing would either not exist or not be effective. However, the evidence of the large Australian domiciled manufacturers paints a different picture. Thus the first proposition examined in this chapter is as follows:

Proposition 1: "Foreign producer" firms occur in significant numbers among the world's largest MNCs.

⁴⁷ As noted in the preceding chapter, such firms are not the focus of the research context in which they are mentioned; reference to them is usually for the purpose of taxonomic completeness.

The analysis also examines two secondary propositions which address the existence of patterns in the distribution of firm types across countries and industries. Research in different domains of the internationalisation literature points to persistent country and industry effects in firm behaviour. The expectation is that the findings of the taxonomic analysis undertaken in relation to these secondary propositions are both consistent with and extend existing research findings.

Research into the effect of country capabilities on firm behaviour and competitiveness lends empirical and theoretical credence to the concept of a country effect on the way a firm is organised. For instance, a substantial stream of empirical research suggests that cultural values, which vary across nations, influence managerial decisions (e.g. Hofstede, 1980; Schneider and De Meyer, 1991), management styles (Ouchi, 1981; Abegglen and Stalk, 1985; Ueno and Sekaran, 1992) and approaches to strategy (Pascale and Athos 1981; Hamel and Prahalad, 1989). Alternative explanations for country differences rely on path dependent conceptualisations of organisational capabilities (e.g. Chandler, 1990; Kogut, 1991, 1993; Westney, 1993), which hold that these capabilities may be heterogeneous because the stock of knowledge on which they are based, and which develops cumulatively, reflects experiential differences between firms (Nelson and Winter, 1982). Work in this tradition proposes that firms retain the imprint of their early developmental history and domestic environment as they internationalise. The contrasting styles of American and European-domiciled MNCs in relation to control systems are one example of evidence for country imprinting: tight measures of accountability are used by US MNC's, while European firms rely on informal, decentralised control (Chandler, 1962; Channon, 1973; Franko, 1976). Similarly, Egelhoff (1988) found that European and US firms adopted different structures as they moved to international competition.

Empirical research into patterns of foreign market servicing behaviour also indicates differences between countries and between industries (e.g. Dunning and Pearce, 1981; Williamson, 1990). National differences in the tendency to engage in foreign production have repeatedly been identified (Stopford and Haberich, 1978; Dunning and Cantwell,

1987; Kogut and Singh, 1988). Studies of the foreign investment activity of firms consistently note that the proportion of foreign investment is highest for smaller European countries such as Switzerland, Belgium, the Netherlands and Sweden, and lowest for Japan (Dunning and Pearce, 1975; Buckley and Pearce, 1981; Dunning, 1993).⁴⁸ Dunning and Pearce (1981), for example, report that the industrial distribution of foreign production for 1977 varies considerably between countries for their sample of 523 of the world's largest industrial enterprises in 1978. In this context they note criticisms of the high level of US foreign production by research intensive firms and suggestions that in these areas where the US has greatest competitive strength it should meet demand for these products by exporting from home production (Dunning and Pearce, 1981, p.105). By contrast, Japanese firms in the sample have below average overseas production ratios in those industries.

Strong empirical evidence exists for firm and industry differences in the tendency to engage in foreign direct investment - much of it in the transaction costs paradigm of economics based research, seeking to explain foreign direct investment in terms of a tendency to internalise market transactions (Shane, 1994). In a study of the 642 largest industrial companies in 1972, half of which are US firms, Dunning and Pearce (1975) find clear patterns of foreign production ratios, noting that resource-based industries (e.g. oil and petroleum, and other metals), market oriented sectors (tobacco, food, products and beverages) and "research intensive" sectors⁴⁹ (mechanical engineering, motor vehicles) recorded above average ratios. They also note the absence of foreign production in some industries: aircraft, aerospace and components, and basic metals. Similarly, Kobrin's (1991) index of integration, which measures intra-firm trade flows (i.e. internal exports), shows wide variation in industry averages. Additionally, Birkinshaw, Morrison

⁴⁸ Dunning and Pearce (1975) examine data on large MNCs for 1962, 1967 and 1972; Buckley and Pearce (1981) analyse data from a related set for 1972 and 1977; while Dunning (1993) reports the economic activity of the leading industrial companies with global sales more than \$1 billion in 1989.

⁴⁹ These are defined as industries in which artificial barriers to trade (eg tariffs) and entry by indigenous producers trigger the establishment of foreign production units by MNCs (Dunning and Pearce, 1975, p.100).

and Hulland (1995) point to the need to control for different levels of configuration and coordination that are found from industry to industry.

Against the backdrop of the literature's empirical and theoretical support for country and industry differences among MNCs, the following two secondary propositions are examined in this chapter:

Proposition 2 The proportion of "foreign producer" firms varies across countries.

Proposition 3: The proportion of "foreign producer" firms varies across industries.

It should also be noted that, although previous research has shown country and industry differences to exist in foreign market servicing behaviour, that research has analysed the ratios of export propensity and multinationality of production independently of each other. In the analysis reported here, those two foreign market servicing choices are treated as a conjoint event within the firm. Firm type, as defined by this conjoint pattern of foreign market servicing strategy, is the focus of the analysis and extends our understanding of foreign market servicing behaviour.

3.2 Methodology

In order to explore the generalisability of the phenomenon of foreign producer firms, the foreign market servicing behaviour⁵⁰ of large, non-Australian firms is examined at the level of the firm. Choosing the firm as the unit of analysis is driven by the thesis' focus on the firm as the decision making and organisational unit which undertakes and manages foreign production. The importance of studying foreign direct investment at the level of the firm rather than industry is also stressed by Hennart and Park (1994), both because it is firm-specific characteristics which lead to foreign direct investment, and because industry level analysis (incorrectly) assumes homogeneity within an industry.

The study uses information about the foreign market servicing behaviour of 443 of the world's largest multinational enterprises in 1982. These firms represent a subset of the

⁵⁰ Licensing, the third choice available to a multinational manufacturing firm, is not the research focus here.

500 firms identified by Stopford (1982) in the *World Directory of Multinational Enterprises 1982-83*. The data for analysis are obtained from summary information provided by Stopford and Dunning (1983) in a companion volume to the *Directory*.

3.2.1 Database

The *Directory*, first published in 1980, was developed with the intention of providing information about the firms that control important foreign investments (Stopford, 1982, p.xii). To this end, it offers company profiles on the 500 largest industrial corporations in the world that had significant international investments during 1981. These firms, which all had over \$1 billion in sales, accounted for at least 80% of all foreign affiliates and foreign production at the time (Stopford and Dunning, 1983, p.3).

A firm qualified for inclusion if it met one of the following three guidelines: has 25% or more of the voting equity of manufacturing or mining companies in at least three foreign countries; at least 5% of its consolidated sales or assets attributable to foreign investments; or at least \$75 million sales originating from foreign manufacturing operations. Foreign licensing and the establishment of foreign sales subsidiaries were ignored. Stopford notes (1982, p.xii) that most firms met all three criteria, and further observes that it was difficult to maintain consistency in selection only for firms with relatively small international interest.⁵¹ Firms from several industries were excluded: insurance, banking, retailing, commodity broking, engineering contracting and other services, as were major foreign subsidiaries, even where they themselves were multinational.

Stopford (1982, p.xi) reports that the data presented in the two volumes of the *Directory, 1982-83* itself are drawn directly from public sources including annual reports to shareholders, reports to regulatory bodies such as the Securities and Exchange

⁵¹ Stopford (1982) notes that those difficulties were compounded by limited disclosure of foreign investment, especially by European and Japanese companies.

classification schema for diversification strategy. These researchers confirmed the reliability of their *Directory*-derived sample as representing the 100 largest multinationals from each region,⁵³ while Saudagaran (1988) reports that the 500 firms appearing in the *Directory* 1982-83 also appear in the lists of the largest 500 US industrial and 500 non-US industrial companies listed in the May and August 1982 editions of *Fortune*.

3.2.2 The Sample

The data set that is analysed here comprises a total of 443 of the 500 *Directory* firms. Their worldwide sales account for 93.2% of the total worldwide sales of \$2,735,250 million reported by all 500 firms. A remaining 57 firms, whose total worldwide sales account for 6.8% of the total worldwide sales of the complete set of firms, are excluded because insufficient information is available to distinguish between exports from home base and foreign production. The 57 excluded firms are spread across all sizes of firms in the complete set: 12% are from the largest size quartile, based on total worldwide sales, 23% from the second largest, 21% from the third largest, and 44% from the smallest quartile. A list of the firms analysed appears at Appendix 2.

The 443 firms classified here are drawn from all industries represented in the *Directory*. The proportions for each industry are shown in Table 3.1. The industry categorisations utilised by Stopford and Dunning (1983), and indicated in their Table A, are retained here.⁵⁴ Fifteen of the eighteen nations which are home base for the 500 companies are included here, as listed in Table 3.2. The single firms domiciled in Denmark and

⁵³ The firms were chosen from the *Directory* and ranked according to their 1981 worldwide sales. The resulting lists of companies were checked against samples drawn from the two independent lists (the *Fortune* 500 list and *Europe's 10,000 Largest Companies*) using identical criteria. The authors report that the sets selected in this way contained "essentially the same companies, with some minor variations in rankings, as those obtained from Stopford." They report a 95% consistency of companies included in the separate lists, confirming the reliability of the *Directory*-derived samples as representing the 100 largest multinationals from each region.

⁵⁴ Stopford and Dunning (1983, p.111) provide a description of several industry labels. Chemicals includes industrial and agricultural chemicals. Drugs includes pharmaceuticals, over-the-counter medicines and toiletries. Electrical includes electrical machinery and electronics, but excludes computers. Office equipment includes computers. Machinery is non-electrical machinery for industrial and agricultural use. Metals includes mining and both primary production of ferrous and non-ferrous metals and secondary fabrication. Textiles includes apparel and leather goods.

Luxembourg, and the three firms from South Africa are excluded because of insufficient data.

3.2.3 The variables

The data analysed here are taken from the reporting in Table A of the companion volume to the 1982-83 *Directory* (Stopford and Dunning, 1983, pp.111 ff) of: (1) Total worldwide sales; (2) Sales of overseas subsidiaries as percentage of worldwide sales;⁵⁵ and (3) Direct exports from home country as percentage of worldwide sales for 500 firms. A simple transformation of this data generates a) Total worldwide group sales; b) Total foreign production; c) Total direct exports from home base; and d) Total domestic production. These in turn are used to calculate the two ratios utilised in the classification schema being applied:

The export propensity ratio: direct exports from home country
divided by domestic production.

The multinationality of production ratio: foreign production divided by total
worldwide sales.

Table 3.1: Industry representation of firms analysed

Industry	No. analysed	% of industry in Directory
Aerospace	7	100
Autos	35	95
Building materials	18	90
Chemicals	43	98
Drink	11	85
Drugs	29	97
Electrical	38	88
Food	44	90
Machinery	43	86
Metals	57	85
Miscellaneous	24	80
Office equipment	16	100
Oil	32	94
Paper	8	80
Rubber	21	78
Textiles	11	73
Tobacco	6	86

⁵⁵ Stopford notes in the introduction to the *Directory* that foreign sales have been split between exports from the home country and production from overseas subsidiaries (Stopford, 1982, p.xiv). That information recorded in the *Directory* is summarised in Table A in Stopford and Dunning (1983, pp.65ff).

Table 3.2: National representation of firms analysed

Country	No. analysed	% of country in Directory
Australia	2	67
Austria	2	67
Belgium	1	25
Canada	15	88
Finland	1	100
France	15	75
Germany	29	88
Italy	4	67
Japan	58	94
Netherlands	6	75
Norway	1	100
Sweden	14	88
Switzerland	8	80
UK	66	97
USA	221	91

In their reporting of Table A, Stopford and Dunning (1983) note different reporting practices by firms. It follows that determining the foreign production and direct exports from home base measures involves differences across subsets within the full data set of 500 firms. These differences, across seven subsets, are outlined in Appendix 3. For 230 firms (subsets 1 to 4), “sales of overseas subsidiaries” is taken to represent foreign production, or used as the basis for calculating foreign production. Complete information in this respect is available for 170 firms (subsets 1 to 3). For a further 60 firms, data is provided for both exports and sales of overseas subsidiaries, but there is no explicit indication whether the foreign sales include exports from home base (subset 4). It is assumed that foreign sales equal foreign production for these firms, and that assumption is tested.

There is incomplete information for the remaining 270 firms.⁵⁶ Where the entry in the exports column is “–”, either foreign assets or foreign employment data are used as the proxy for foreign production (subset 5: 146 firms⁵⁷). The correlation between foreign production and foreign assets is $r=.854$ and between foreign production and foreign

⁵⁶ 230 of these are used in the analysis conducted here.

⁵⁷ An additional 17 firms fall into subset 5, but are not included in the data set for analysis because neither foreign assets nor foreign employment data are provided.

employment is $r=.853$.⁵⁸ Where the entry in the sales of overseas subsidiaries column is “–”, foreign production is assumed to be zero (subset 6: 67 firms). For the remaining firms (subset 7: 40 firms), data is not provided either for sales of overseas subsidiaries or direct exports. Accordingly, they are excluded from the analysis. Characteristics of the subsets are summarised in Table 3.3 below. A complete description of the assumptions and validity checks in each case is provided in Appendix 3.

Table 3.3 Summary characteristics of data set (n=443)

Subset	Criterion for inclusion	% of 500 ^a	% of sales ^b	% per quartile ^c			
				1	2	3	4
1	explicit indication that sales of overseas subsidiaries excludes all exports	24	21	30	24	20	26
2	explicit indication direct exports = 0	6	6	25	14	39	21
3	explicit indication that overseas sales includes direct and indirect exports	4	4	43	19	24	14
4	data provided on both sales of overseas subsidiaries and direct exports, no explicit indication of whether overseas sales includes exports	12	12	30	23	23	24
5	data provided for overseas sales, “–” for direct exports	29 ⁵⁹	40 ⁶⁰	19	26	28	27
6	data provided for direct exports, “–” for overseas sales	13	10	24	32	25	19
7	no data provided for overseas sales or direct exports (excluded)	8	5	42	23	23	12

a 500 firms identified in Stopford and Dunning’s (1983) Table A

b Total Worldwide Sales accounted for by all 500 firms

c Quartiles based on Total Worldwide Sales of the 443 firms analysed; where quartile 1 is the smallest

The ratios of export propensity and multinationality of production are then used to locate each firm on the classification schema described in Chapter 2.⁶¹ In the case of US firms, the large size of the domestic market relative to the world market for most products would depress their position on the vertical axis (export propensity). Thus a US firm with a

⁵⁸ Data on foreign assets were available for 140 firms from these subsets, and on foreign employment for 127 firms.

⁵⁹ This percentage excludes the 17 firms that fall into this subset but are not used in the analysis.

⁶⁰ The 17 firms from this subset not used for analysis had sales that totalled 2% of the total worldwide sales of the 500 firms.

⁶¹ The 20% cutoff that is used for each axis has some empirical support within this data set of large MNCs: the median value for multinationality of production is 21% and 25% for export propensity.

Commission in the USA and general publicity. The majority of profiles were also reviewed, and amended where necessary, by company personnel.

A companion volume, aggregating the data on these 500 companies and interpreting their significance was published in 1983 (Stopford and Dunning). One of the summary tables contained in that volume, 'Table A: Overseas Activity of Directory Firms, 1981 and 1977' (Stopford and Dunning, 1983, p.111), provides the data used in the analysis reported here. The table ranks all 500 *Directory* firms in descending order of the US dollar value of worldwide sales, and provides information on the proportion of sales, profits, assets and employment outside the home country in both 1981 and 1977.

Although the use of this data set does not generate a random sample from a theoretically defined population of MNCs, it does provide for inclusion of a diverse set of industries, and for inclusion of subsets of both US and non-US firms which researchers treat as representative of the population of the world's largest MNCs. The *Directory*'s listing of firms is regarded as a representative set of large industrial multinationals (Rugman, 1983; Delacroix, 1984). It has been utilised as the basis for constructing worldwide, or national, samples of multinationals for analysis in a range of internationalisation research. For instance, Rugman (1983) derives a sample of 141 European-domiciled multinationals from the 1980 *Directory* (Stopford, Dunning and Haberich, 1980). Bartlett and Ghoshal (1989) used the 1982-83 edition of the *Directory* to obtain the large sample survey⁵² for the third phase of their study that culminated in their identification of the transnational form, and in subsequent research (Ghoshal and Bartlett, 1988; Ghoshal and Nohria, 1989; Ghoshal and Nohria, 1993). For their part, Geringer, Beamish and daCosta (1989) select a sample of 200 MNEs consisting of the 100 largest firms from the U.S. and Europe from the 1982-83 *Directory*, and use its descriptive narratives, supplemented by 10K and Annual Financial Reports, to classify each firm according to Rumelt's (1974)

⁵² This phase involved a questionnaire survey to explore hypotheses generated in their preceding case research into nine firms from three selected industries (consumer electronics, branded packaged goods and telecommunications switching). The questionnaire was mailed to all the 438 North American and European MNCs listed in Stopford's (1982) *Directory*. Completed questionnaires were returned from 76 firms. Of those, 66 were complete, and were used for statistical analysis.

significant presence in the world market may appear to have a lower export propensity than a firm from a small economy that was a marginal player in the world market. Accordingly the value for domestic production is divided by 5 for US firms. This denominator is based on the relative size of the US and major European GDPs. In terms of the category of firm that is the subject of the propositions examined in this chapter, that action is conservative, and results in moving US firms from the foreign producer to the mixed mode category. This transformation is reconsidered under validity threats.

3.2.4 Analysis

The critical focus of this chapter is to investigate the incidence of foreign producer firms, which the existing literature assumes are either temporary forms in transition or inappropriate forms which will fail in competition with transnationals or other forms that have a sustainable competitive advantage. Accordingly, the relevant criterion is that the observed incidence of foreign producers is above a trivial level. For example, the argument might be that an incidence above 5% would be judged significant support for Proposition 1.

Alternatively, significant findings supporting Propositions 2 and 3, namely that there are country and industry effects on the incidence of foreign producers, would be strong indirect evidence for the existence of such firms. If such firms did not exist, then there would not be significant causes of their differential incidence. To test propositions 2 and 3, the binomial model:

$$\log(p/1-p) = \alpha + \beta_i + \gamma_j + \delta \log(\text{size})$$

is fitted, where p = probability that a firm is a foreign producer, and β_i and γ_j are industry and country effects, respectively, and $\log(\text{size})$ controls for size. To estimate country effects, countries with two or fewer firms in the database are excluded.

The effect of size is also an indirect test for the alternative proposition that such firms are either in transition into another form or about to fail in competition with another form. A

strong negative coefficient would be consistent with but not a powerful test of this joint hypothesis, whereas a nonsignificant or significant positive size effect would strongly suggest the argument that such firms are competitively viable.

In the results section the incidence of each of the four MNC forms is presented. The binomial model is estimated and the country, industry and size effects are reported. Together they provide strong evidence for the significant incidence of the foreign producer firm.

3.3 Results

Proposition 1 is supported: foreign producers account for 110 of the 443 *Directory* MNEs. Applying the classification schema described in Chapter 2 to the 443 firms for which foreign production and domestic exports ratios could be estimated results in the distribution of firm types presented in Figure 3.1.

Figure 3.1: Categorisation of 443 of the world’s largest industrial MNCs

Export propensity	High	<div>Global exporter</div> <div>118</div>	<div>Mixed mode MNC</div> <div>121</div>
	Low	<div>94</div> <div>Local operator</div>	<div>110</div> <div>Foreign producer</div>
		Low	High
		Multinationality of production	

Categorising firms by type within country groupings shows that foreign producers vary as a proportion of national portfolios of large MNCs. For example, as shown in Table

3.4 which reports the percentage of firms within a country for each of the four MNC types, foreign producers are 45.5% of the stock of UK MNCs, while, by contrast, they make up only 3.5% of the large MNCs in Germany,⁶² 7.1% of those in Sweden, and are absent from Japan. Proposition 2 is supported: the proportion of foreign producer firms varies across countries (binomial model - country effect: $df = 9$, $\chi^2 = 43.2$, $p \leq 0.001$).

Table 3.4:
Proportion of firm type by country

Country	<i>n</i>	% Local operator	% Foreign producer	% Global exporter	% Mixed mode MNC
USA	221	25.8	28.5	21.3	24.4
United Kingdom	66	13.6	45.5	7.6	33.3
Japan	58	43.1	0.0	56.9	0.0
Germany	29	0.0	3.5	58.6	37.9
France	15	0.0	33.3	33.3	33.3
Canada	15	13.3	26.7	20.0	40.0
Sweden	14	0.0	7.1	14.3	78.6
Switzerland	8	0.0	37.5	0.0	62.5
Netherlands	6	0.0	16.7	16.7	66.7
Italy	4	25.0	0.0	50.0	25.0
Australia	2	0.0	50.0	50.0	0.0
Austria	2	0.0	0.0	100.0	0.0
Belgium	1	0.0	100.0	0.0	0.0
Finland	1	0.0	0.0	0.0	100.0
Norway	1	0.0	0.0	0.0	100.0

Categorising firms by type within industry groupings similarly shows that foreign producers vary as a proportion of industry groups of large MNCs. Table 3.5 reports the percentage of firms within an industry for each of the four MNC types identified by the schema used here. Foreign producers represent 63.6% of firms in both the food and drink industries, and a significant proportion of those in building materials (38.9%), rubber (37.5%), drugs (37.9%) and oil (31.3%). In many industries, including electrical (10.5%), autos (14.3%), machinery (14.0%), metals (14.0%) and paper (14.3%), their frequency is relatively low, while at the most extreme, there are none in aerospace.

⁶² Researchers acknowledge the effect of confiscations during two world wars on West German foreign direct investment (e.g. Dunning and Cantwell, 1987).

Proposition 3 is supported: the proportion of “foreign producer” firms varies across industries (binomial model - industry effect: $df = 16$, $\chi^2 = 65.3$, $p \leq 0.001$).

Table 3.5:
Proportion of firm type by industry

Industry	<i>n</i>	% Local operator	% Foreign producer	% Global exporter	% Mixed mode MNC
Aerospace	7	0.0	0.0	85.7	14.4
Autos	35	8.6	14.3	45.7	31.4
Building materials	18	33.3	38.9	11.1	16.7
Chemicals	43	23.3	18.6	23.3	34.9
Drink	11	27.3	63.6	9.1	0.0
Drugs	29	6.9	37.9	3.5	51.7
Electrical	38	5.3	10.5	44.7	39.5
Food	44	25.0	63.6	6.8	4.6
Machinery	43	9.3	14.0	34.9	41.9
Metals	57	24.6	14.0	40.4	21.0
Miscellaneous	24	37.5	16.7	33.3	12.5
Office equipment	16	12.5	18.8	18.8	50.0
Oil	32	46.9	31.3	3.1	18.8
Paper	21	38.1	14.3	28.6	19.1
Rubber	8	12.5	37.5	25.0	25.0
Textiles	11	27.3	18.2	36.4	18.2
Tobacco	6	16.7	16.7	0.0	66.7

Finally, in addition to country and industry effects, there is strong evidence for a size effect. The probability that firms adopt a foreign producer strategy is a positive function of size (binomial model - size effect: $df = 1$, $\chi^2 = 5.5$, $p \leq 0.05$).

3.4 Discussion

This chapter shows that firms which compete through a dominant foreign producer strategy, with a low reliance on exports from their domestic base, constitute an important class of firms among the world’s largest MNCs. Figure 3.1 reports that of the 443 firms for which Stopford and Dunning (1983) provide data on which they can be classified as high/low on export propensity and multinationality of production, 24.8% base their strategy on being a foreign producer. These firms have a low export propensity and a

high degree of multinationality of production. This is a relatively neglected competitive form in the international management literature. As such, their existence raises important and novel research and managerial questions about both how they compete and how they are managed. The results in Tables 3.4 and 3.5 also show that the choice of this organisation form is a function of both the country in which their domestic base is located and the industry in which they compete. Here, the validity threats to the findings are examined, the contribution to the existing research is discussed.

3.4.1 Validity threats

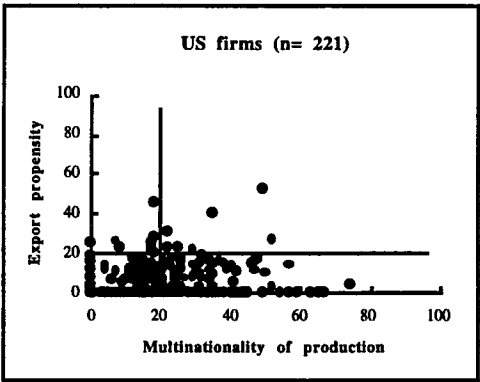
This classification of firm type uses an adjusted export propensity ratio for US firms, in which the denominator (domestic production) is divided by 5 to adjust for large size of the domestic market in most products. When that adjustment is not made, the proportion of foreign producers and of local operators is higher, at the expense of mixed mode MNCs and global exporters respectively, as shown by Table 3.6.

Table 3.6: Comparison of adjusted and unadjusted categorisation

	% of firms in category	
Firm type	US ratio adjusted	US ratio not adjusted
Local operator	21	30
Foreign producer	25	35
Global exporter	27	18
Mixed mode MNC	27	17

Accordingly, the more conservative approach utilising the adjusted US export propensity ratio, is adopted. With export propensity unadjusted, US firms are predominantly foreign producers, as Figure 3.2 shows. The pattern with adjusted ratios appears in Figure 3.5.

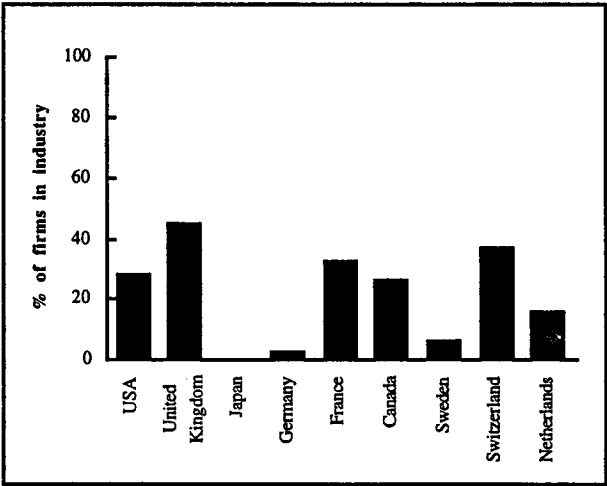
Figure 3.2: Pattern of US firm types with no adjustment



3.4.2 Pattern of findings

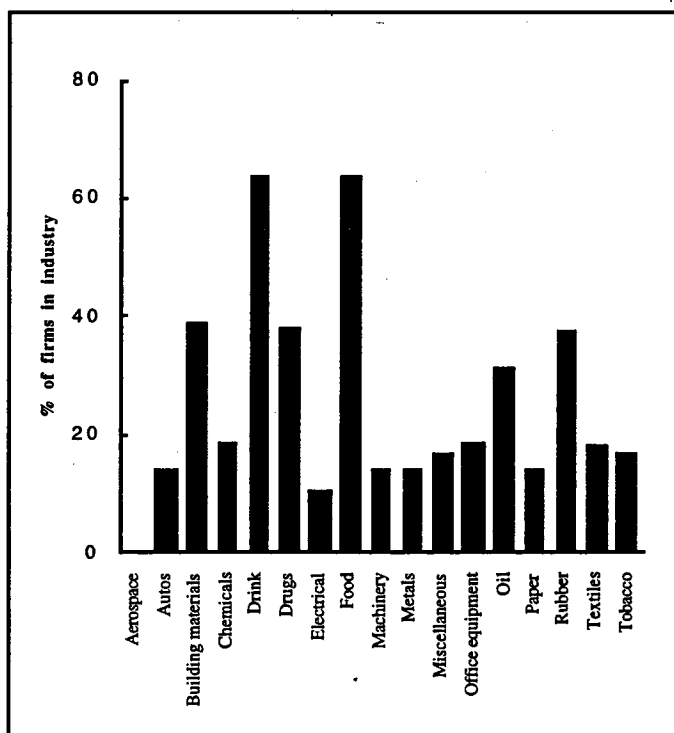
As well as revealing that foreign producers constitute a significant proportion of the world’s largest MNCs, applying the categorisation schema shows that foreign producers are to be found in all except one (Japan) of the countries that are host to more than one percent of the large MNCs (Figure 3.3), and in all industry categories except aerospace (Figure 3.4).

Figure 3.3: Foreign producers as % of firms from countries*



* Countries that are host to 4 or fewer firms in data set are excluded

Figure 3.4: Foreign producers as % of firms in industries



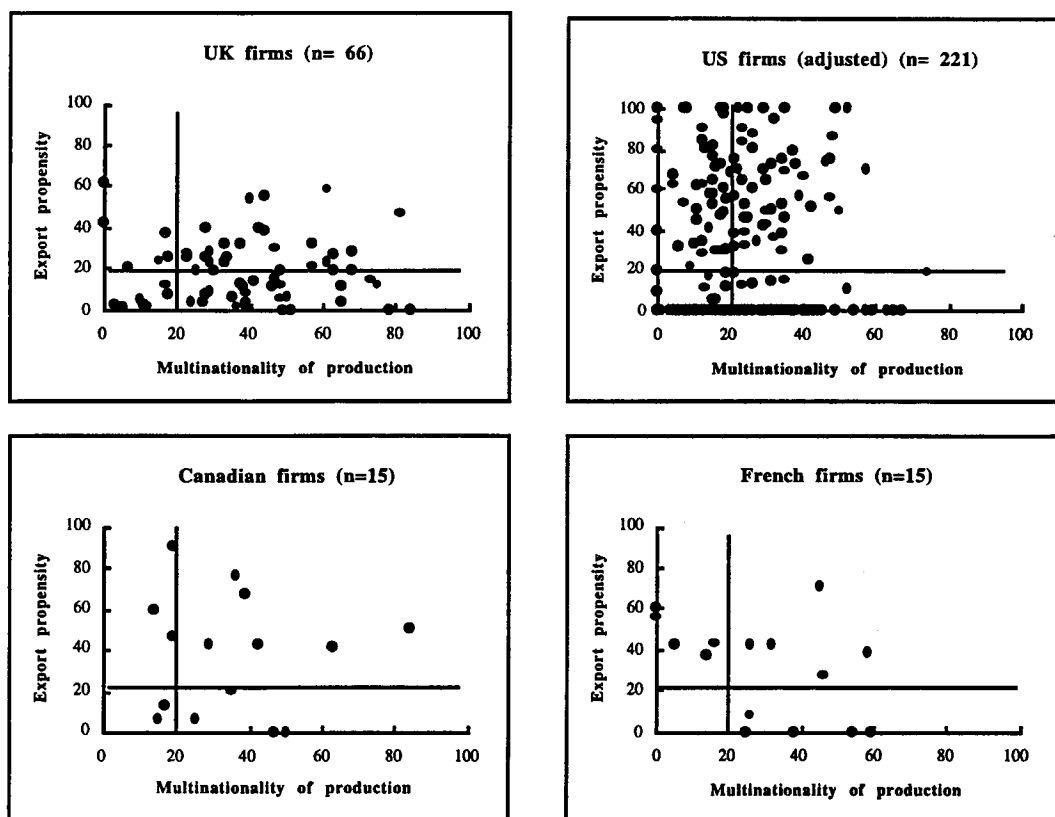
3.4.2.1 Country patterns

The data also reveal variations in the overall pattern of firm type across countries (Proposition 2). This is particularly evident when firm types are plotted using the same axes that revealed the seemingly unusual Australian pattern (Figure 2.1).

For instance, the US, UK, Canadian and French national portfolios contain firms in all three categories that involve significant international activity - global exporters, foreign producers and mixed mode MNCs.⁶³ Although UK firms are to be found in all categories, there is a tendency to higher levels of foreign production than exporting. These patterns are illustrated in Figure 3.5.

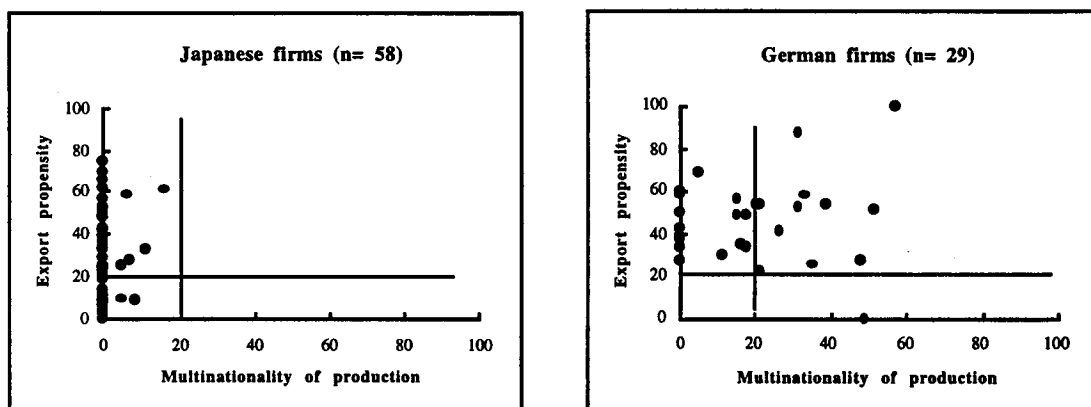
⁶³ Local operators have less than 20% on both ratios of export propensity and multinationality of production. They are largely confined to the biggest economies of the US, Japan and the UK.

Figure 3.5 National portfolios with diversity of firm types



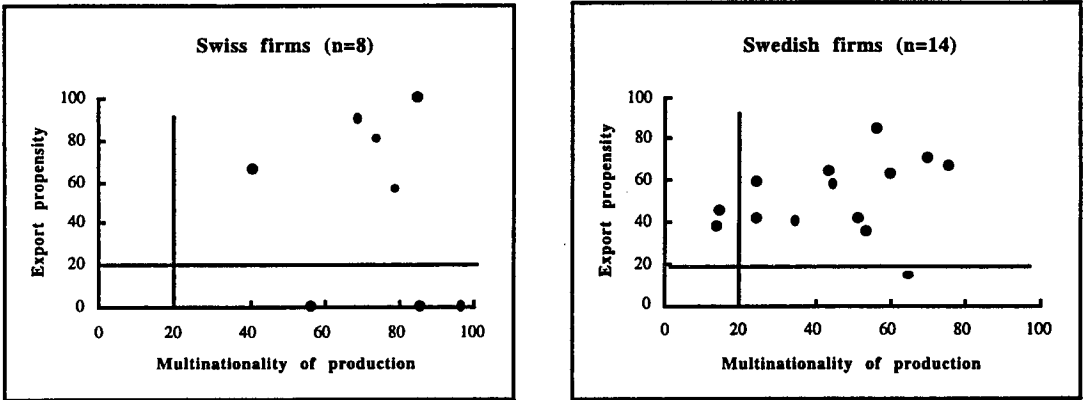
By contrast, Japanese firms are confined to two categories: global exporter and local operator. The German portfolio also has a high proportion of global exporters, combined with a significant proportion of mixed mode MNCs, and only one foreign producer. Figure 3.6 presents these two patterns.

Figure 3.6 National portfolios with high proportion of global exporters



In a different configuration, the Swiss firms are divided between the mixed mode MNC and foreign producer category, while the Swedish portfolio is dominated by mixed mode MNCs (Figure 3.7). Interestingly, the composition of the Swedish portfolio is consistent with the Uppsala research focus on mixed mode MNCs. In effect, the Swedish pattern accords with the emphasis of Swedish research on internationalisation. Equally however, that pattern is relatively distinctive in its homogeneity and preponderance of mixed mode MNCs. This raises the question of the generalisability of models based on the observation of such firms to all MNCs.

Figure 3.7 National portfolios with high proportion of mixed mode MNCs



These plots together suggest significant variance in the pattern of firm type across country, which is confirmed by analysis of the information presented in Table 3.4 ($\chi^2 = 149.8$, $df = 21$, $p \leq 0.001$).⁶⁴ The plots presented here also confirm the unusual nature of the Australian portfolio which originally triggered the research. Foreign producers do not form an obvious focal point for any of the nations included here in the way they do for Australia. In that sense it is not surprising that they have not previously, as a group, become a focus for research attention.

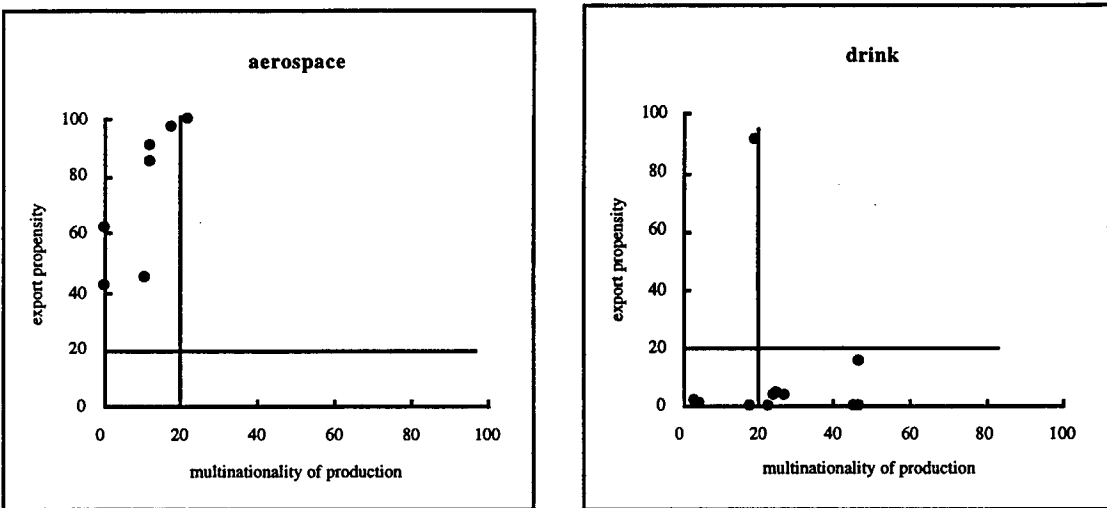
⁶⁴ This analysis excludes Australia (n=2) and collapses into an “other European” category Switzerland, Netherlands, Italy, Austria, Belgium, Finland and Norway (n=23).

3.4.2.2 Industry patterns

The classification schema also allows comparison of competitive patterns at the industry level in terms of foreign market servicing behaviour, and illustrates the variation in the pattern of firm behaviour across industries.

The most extreme patterns occur in the aerospace industry, where all firms choose to compete as global exporters and none engage in significant levels of foreign production, and in the drink industry, where only the single firm that chooses to compete as a global exporter engages in significant levels of exporting (Figure 3.8).

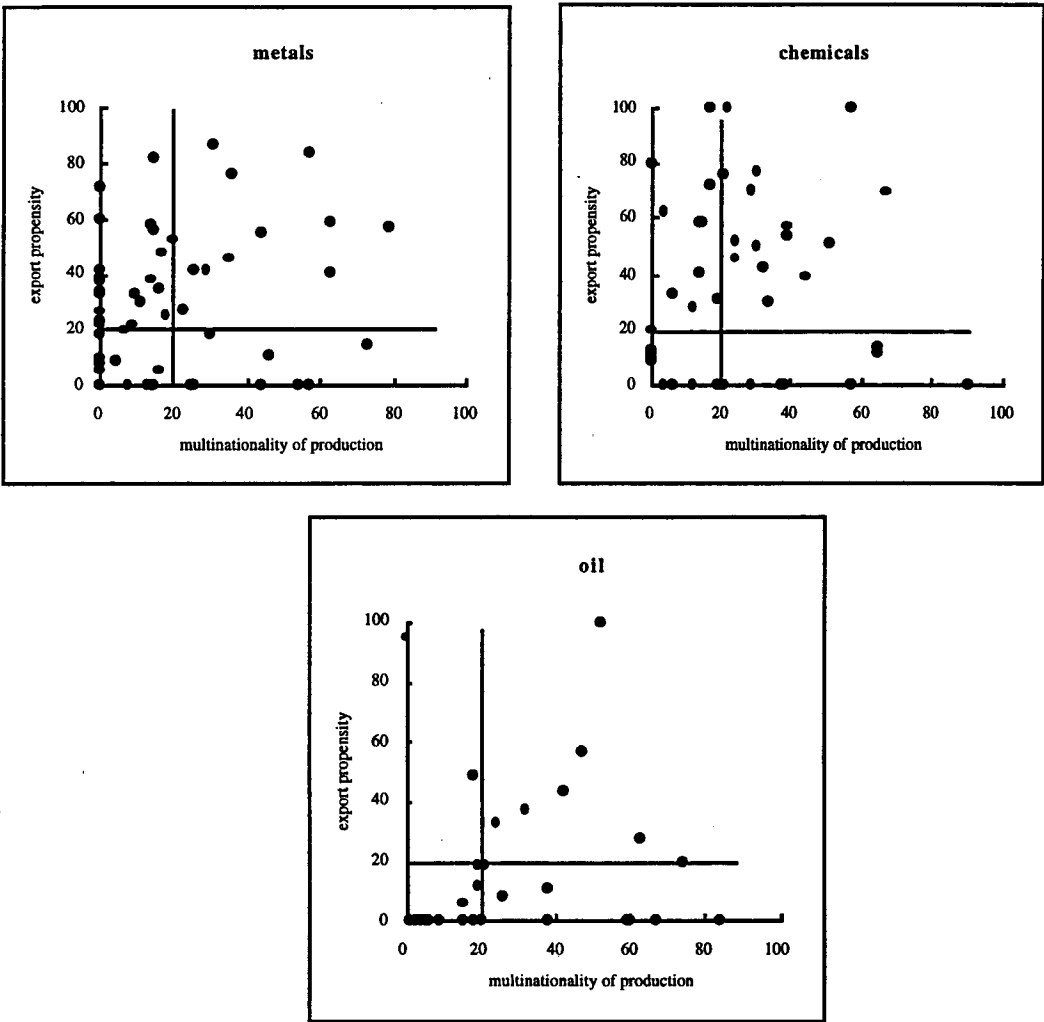
Figure 3.8: Industries with dominant competitive choices



Applying the categorisation schema shows more variance in strategic choice in industries such as metals, chemicals and oil (Figure 3.9). This variation is consistent with research that tests Prahalad and Doz's (1987) model suggesting different responses by firms within the same industry (Roth and Morrison, 1990; Johnson, 1995), and with comments made by Dunning and Pearce (1981, p.106), who note with interest the wide diversity of the multinationality of production ratio for individual firms around the industry average: "In 'petroleum' for instance, for which the average ratio was 50.5 per cent, 11 of the 35 firms have individual ratios over 52.5 percent but, more surprisingly, another 11 have ratios of less than 2.5%. Again, whilst 26 of the 80 'metals' firms have ratios of less than

2.5 per cent, 6 have ratios of over 52.5 per cent.” The classification schema applied here highlights this variance within some industries at the level of firm behaviour.

Figure 3.9: Industries with varying competitive choices

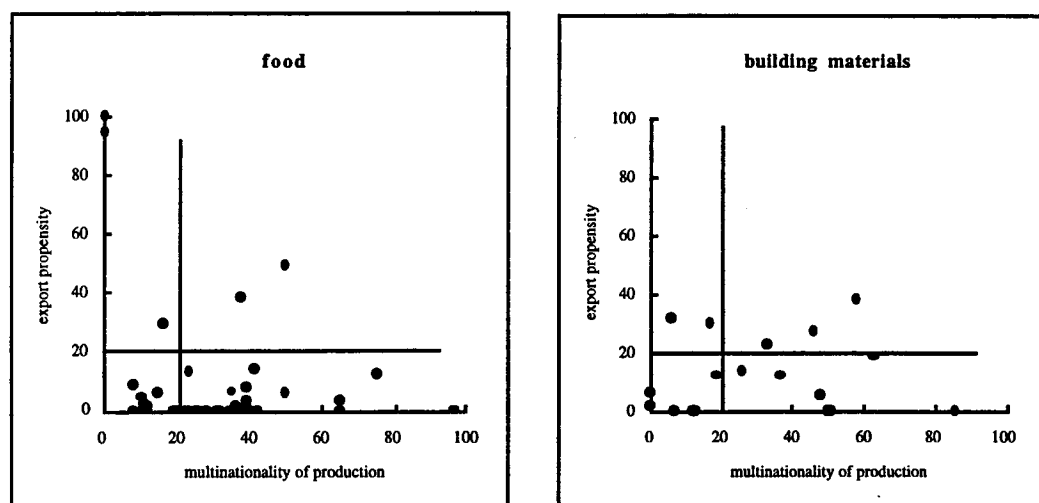


Taken as a set, these figures suggest variance in patterns of firm type, reflecting competitive choices about market servicing across industries. This observation is supported by analysis of the data in Table 3.5 ($\chi^2 = 170.1$, $df = 48$, $p \leq 0.001$).⁶⁵

In addition to the variances across industry, the classification schema indicates that foreign producers dominate in several industries (Figure 3.10).

⁶⁵ Low expected values in some cells violate the χ^2 test assumptions but overall the test results are very strong.

Figure 3.10: Industries where foreign producers dominate

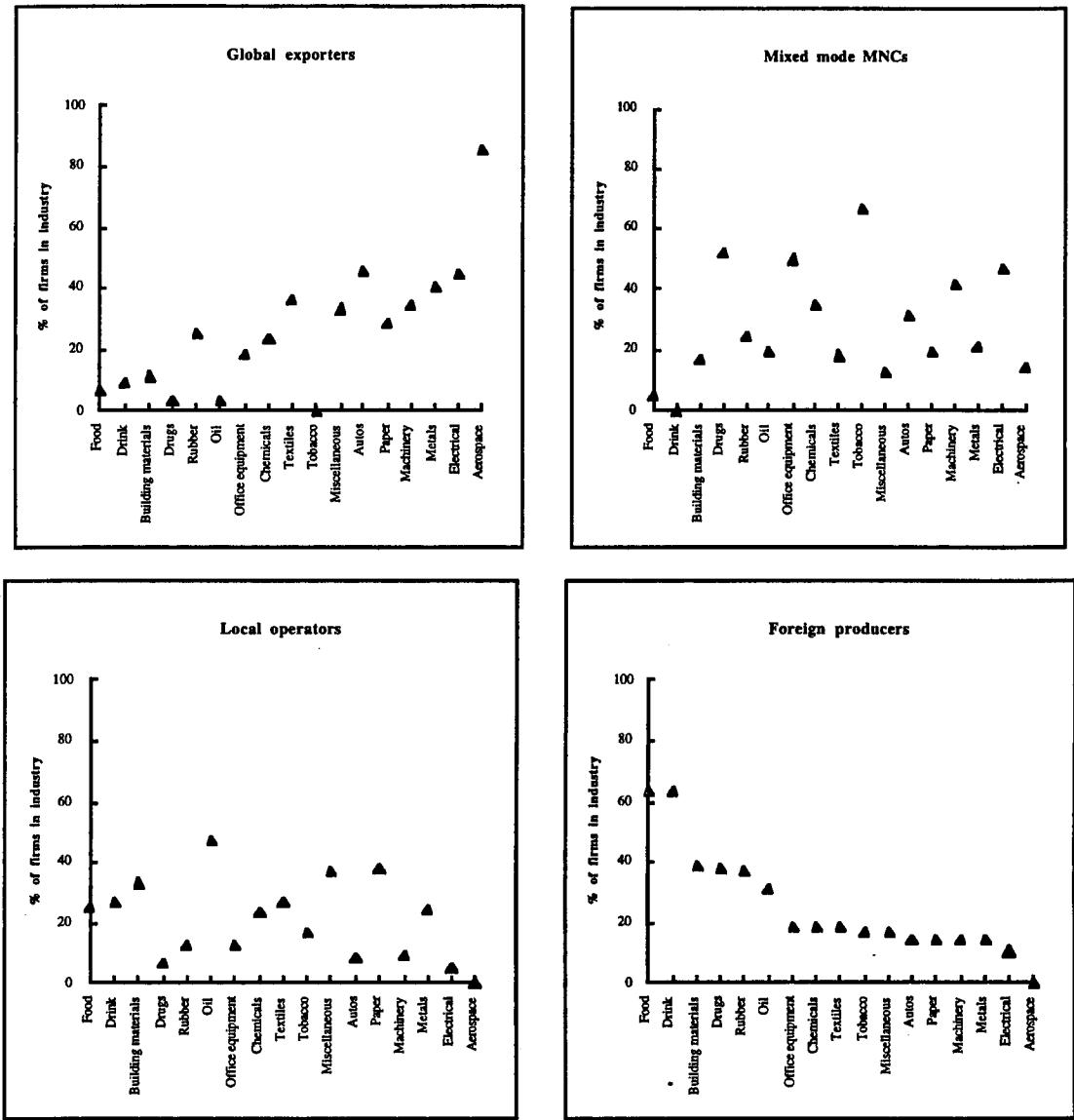


This latter pattern is consistent with the finding of the original field research into the observed Australian foreign producers. Yetton, Davis and Swan (1992) observed that those foreign producers were concentrated in industries where transport costs and technology favour foreign production over exports as the means of expanding internationally. The strategic choices made by the 443 firms categorised here provide some prima facie evidence that such industry differences exist. Figure 3.11 shows that in some industries (food, drink, building materials, drugs, oil) significantly more firms select a foreign producer strategy than a global exporting one, while in others (aerospace, electrical, machinery, autos), global exporting is a relatively frequent choice and there are few foreign producers. It could be argued that this provides prima facie evidence for the existence of industry level determinants such as minimum efficient scale, transport costs and value of product, that differentially favour exporting or foreign production,⁶⁶ and to which some firms respond.

Figure 3.11 compares the proportion of firms in an industry that each of the four firm types represents. The industries are ordered according to the proportion of firms within the industry that are foreign producers, ranging from highest at the left (food and drink, each at 63.6%) to the lowest at right (aerospace at 0.0%).

⁶⁶ This issue remains unresolved. See, for instance, discussion in Kobrin (1991) and Birkinshaw, Morrison and Hulland (1995).

Figure 3.11: Comparison of representation of firm types in each industry



Presenting the data in this fashion invites further speculation. Interestingly, although the figure suggests a negative relationship between the proportions of foreign producers in an industry and global exporters, there is no apparent relationship between attractiveness of a foreign producer strategy and choice of a mixed mode or local operator strategy.⁶⁷ The lack of relationship with a mixed mode MNC strategy is consistent with the frequently made observation that in the post World War II period, many MNCs undertook foreign production in order to gain access to markets that were protected from foreign imports by

⁶⁷ If the pattern for global exporters were simply a function of the ordering of industries based on descending frequency of foreign producers, one would expect it to be apparent also in the other two categories (local operators and mixed mode MNCs).

tariff and other barriers. Thus for some mixed mode MNCs, the strategic response may be to government imposed factors, rather than to industry technological or cost characteristics, which of themselves, might otherwise favour a global exporting strategy. In turn, a local operator strategy may primarily reflect size of domestic market: most small economies do not provide sufficient demand for a firm with low levels of foreign sales to reach the threshold for inclusion in a set of the world's largest firms. Investigating such issues would, however, be a subject for future research.

3.4.2.3 Country/industry interaction

Although the discussion has identified country and industry patterns, it does not provide evidence that either industry or country alone explain the choice of foreign producer strategy. It is evident from the firm-level categorisations of foreign market servicing strategies of these large MNCs that, in some instances, country and industry effects interact. Again, this is consistent with the original research into the observed Australian foreign producers. Yetton, Davis and Swan (1992) suggest that industry composition of the set of large Australian manufacturing firms reflects Australia's youth and its political and economic history. Following federation of the six colonies as a Commonwealth in 1901, Australia followed consistent policies for eighty years - encouraging immigration and capital inflow (especially direct equity investment in industry) and providing tariff protection to most manufacturing industries as an inducement. Given the country's political stability and high incomes (derived importantly from exploitation of its rich mineral and agricultural resource base), these proved to be a sufficient inducement to attract first UK firms and then a broad range of American, European and finally Japanese MNCs. This inward investment, however, was especially focused in the sectors of manufacturing with the highest export levels as a proportion of world trade: motor vehicles, instruments, chemicals, computers, etc. It follows from the above that one would expect Australian domiciled firms to be concentrated in the residual sectors in which export levels as a proportion of world trade are lower. Thus the industry composition of Australian manufacturing firms is a legacy of history. The industry

composition in turn increases the probability of Australian firms choosing a foreign producer strategy.

Similar country-industry interactions can be illustrated within the set of firms categorised in this chapter. Figure 3.12 depicts the US industrial composition. Industries are again ordered according to the proportion of firms in the industry which are foreign producers, from highest (food) to lowest (aerospace). The columns in turn show the number of US firms in each of the seventeen industries: each column is shaded to indicate the proportion of each of the four types of firms within that industry. Figure 3.11 shows that a considerable number of the US firms are in the industries at the left hand end of the scale, which have a higher proportion of foreign producers.

Similarly, the UK national industrial profile for the large MNCs analysed here, reveals strong representation among the industries in which foreign producers are prevalent (Figure 3.13).

Figure 3.12: US industry profile and firm type

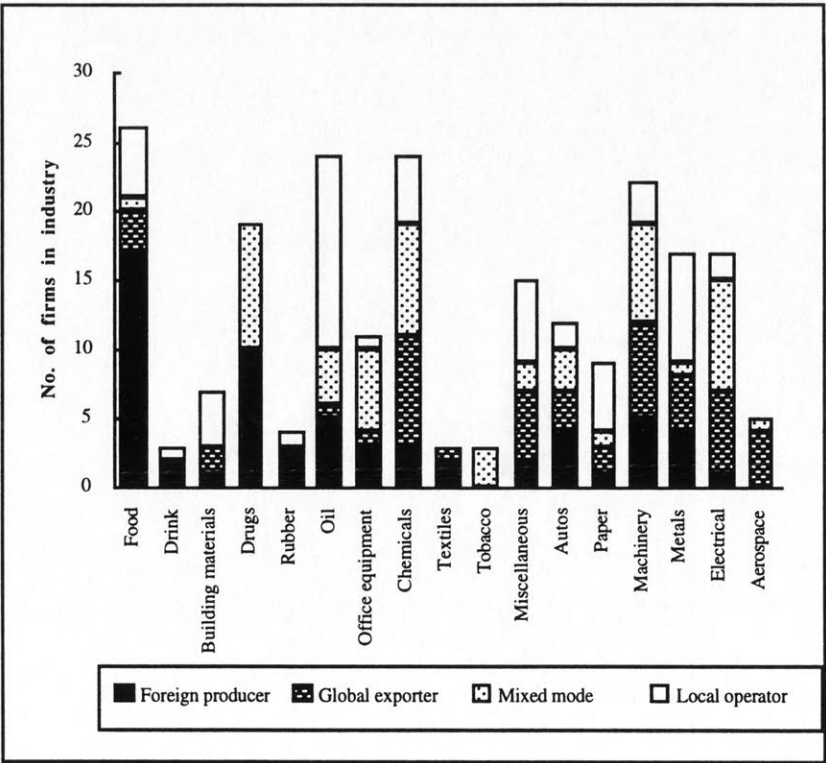
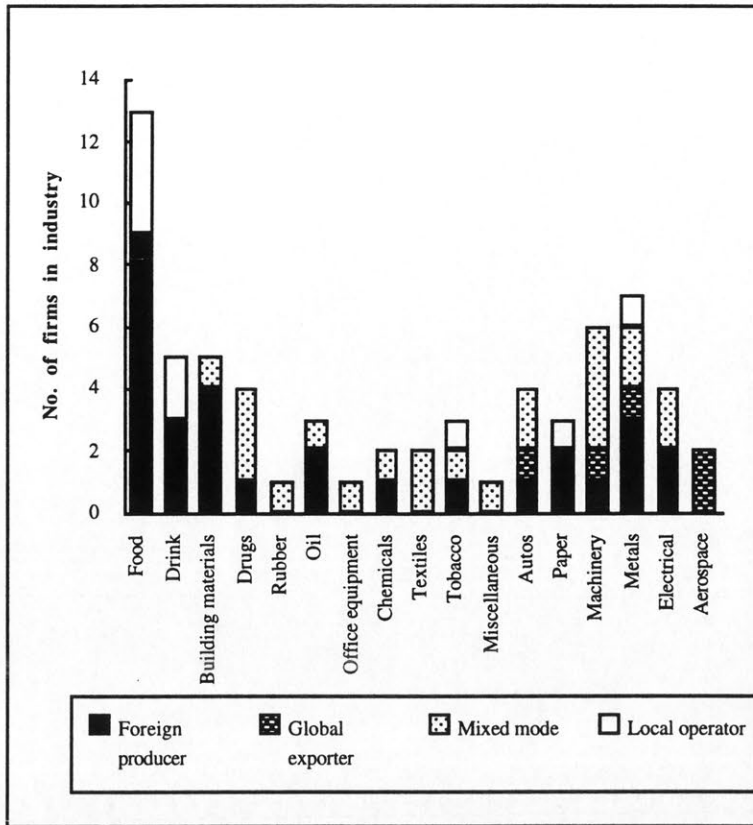


Figure 3.13: UK industry profile and firm type



By contrast, Japan and Germany are host to proportionately few firms in those industries. Their large MNCs are concentrated in the industries for which there are few foreign producers, and a higher proportion of global exporters. Both these nations have a relatively high percentage of global exporters. Figure 3.14 depicts these two industrial profiles.

As mentioned above, the observed Australian industrial firms which are large enough to have a significant international presence, and primarily fall into the foreign producers category, are concentrated in the building materials, food and drink industries in which the foreign producer firm type predominates.

Although these patterns suggest the existence of country-industry interactions, they do not provide evidence for which of the two, if either, is primarily causal. This is highlighted by the Swedish profile (Figure 3.15), which shows that, although the Swedish firms are also concentrated in the industries in which global exporters are

relatively most prevalent, the majority of the Swedish firms choose to service foreign markets as mixed mode MNCs rather than as global exporters.

Figure 3.14: Japanese and German industry profiles and firm type

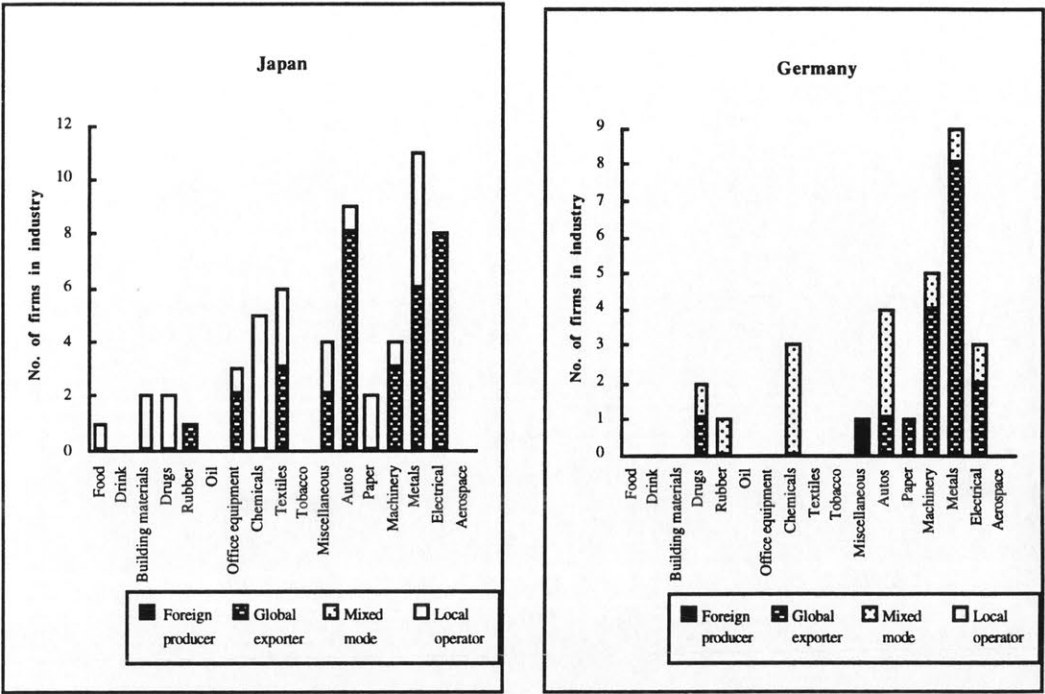
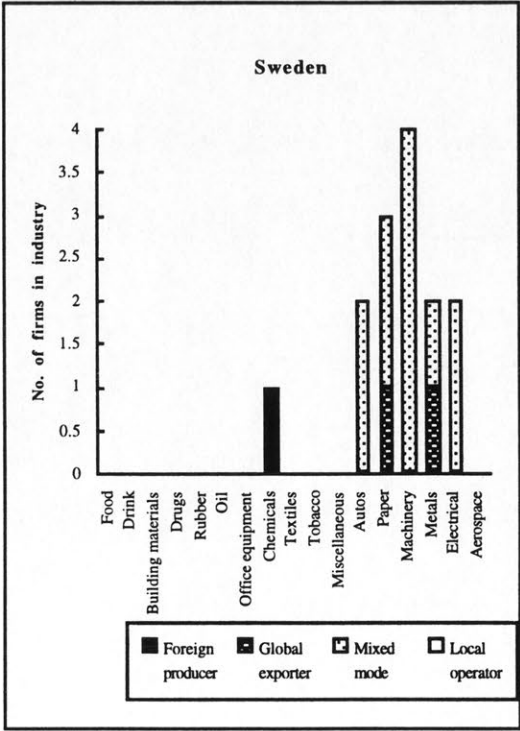


Figure 3.15: Swedish industry profiles and firm type



3.4.2.4 Size effects

The final set of patterns reported here relates to the relationship between firm size and firm type, with a particular focus on the influence of size on being a foreign producer. A logit test shows that size has a positive effect on a firm being a foreign producer. This is consistent with findings elsewhere that foreign production levels increase with firm size (e.g. Dunning and Pearce, 1981).

This result has implications for the stages model assumption that a firm will change its behaviour over time as it becomes a more seasoned international player, moving from exporting to a mix of foreign production and exporting as it becomes a mature MNC. In this conceptualisation, firms that have been competing internationally for longer will have come to engage in both exporting and foreign production at high levels. Research has shown that size is closely related to a firm's decision to compete offshore and that size continues to increase over time once a firm is servicing foreign markets (Swedenborg, 1979; Auquier, 1980). Accordingly, if choosing to service foreign markets primarily by foreign production represents an early stage internationalisation strategy, then one would expect to observe only the smaller firms in an industry, or from a nation, in this quadrant. Likewise, the largest firms should dominate the mixed mode MNC quadrant. The selection of industry and country plots in which circle size indicates total worldwide sales in Figures 3.16 (industry) and 3.17 (country) indicates that this is not the case.

3.4.3 Implications for theory

The finding that foreign producers constitute a significant proportion of the largest MNCs carries implications for the conceptualisation of MNC forms. Understanding how to manage foreign producers is necessarily a subject of interest in the domestic Australian policy context because of their predominance in the national portfolio of large industrial firms. However, whether theory development about effective organisational configuration for these firms has a wider application is dependent on the empirical

Figure 3.16: Firm size for selected industries

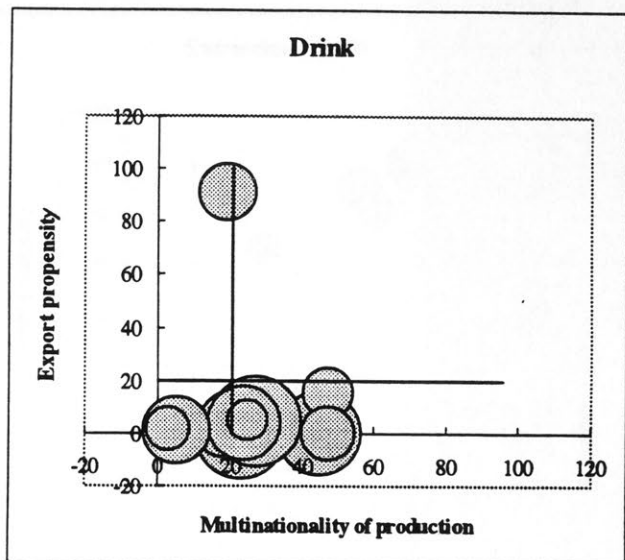
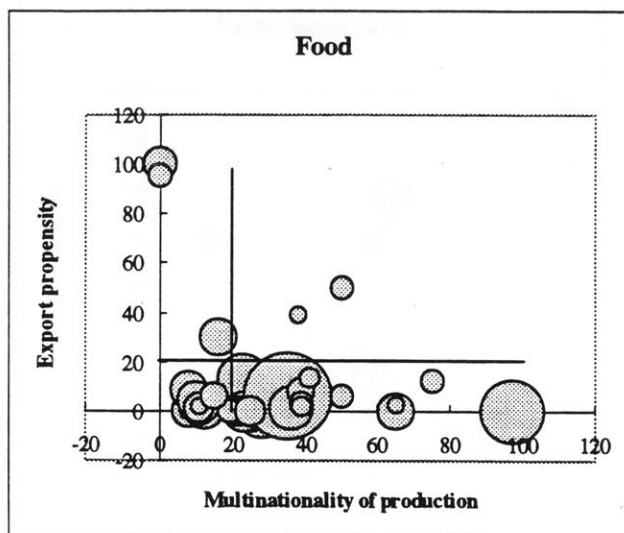
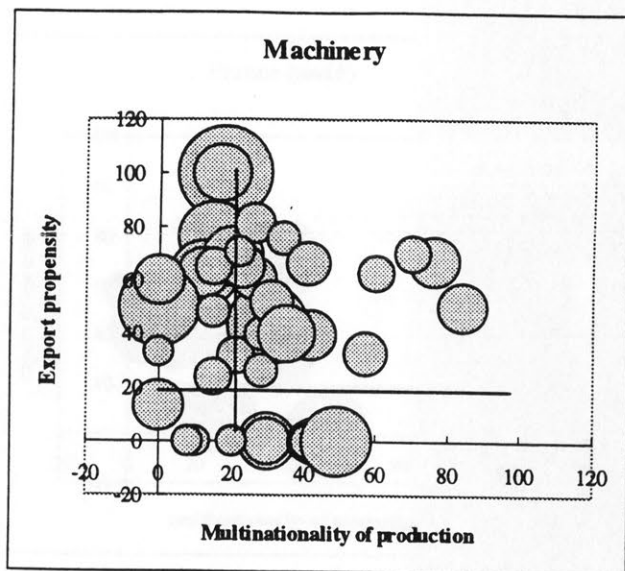
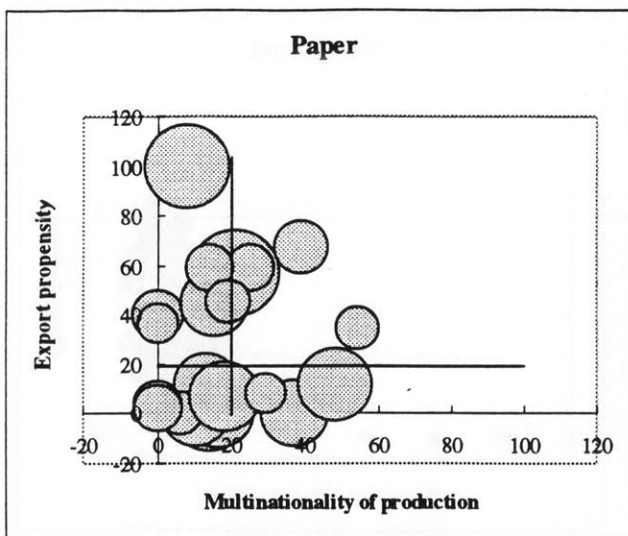
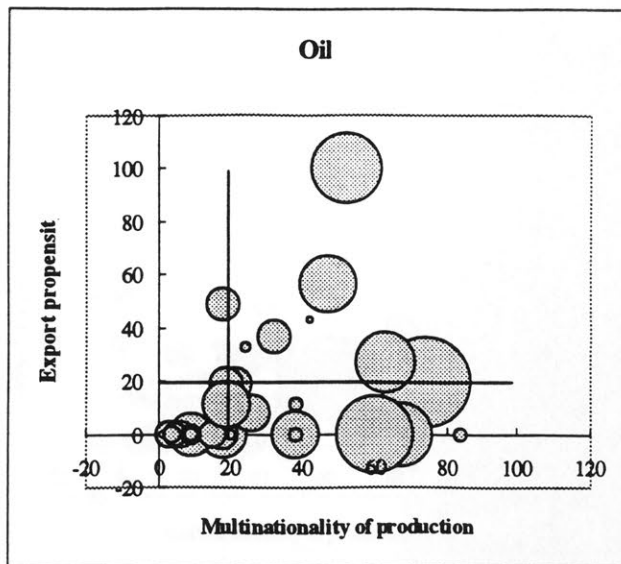
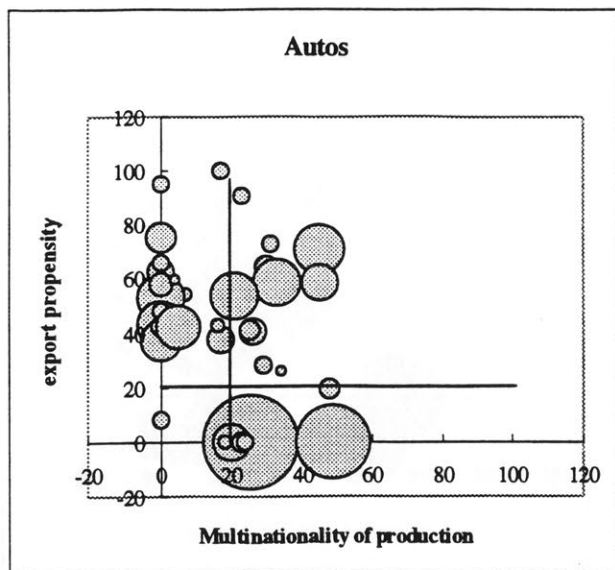
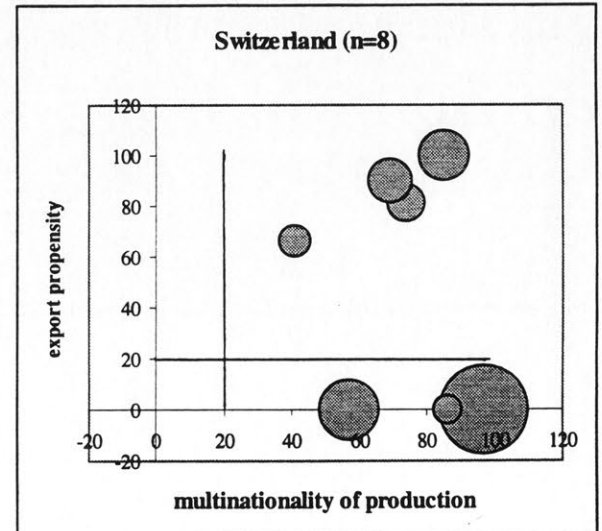
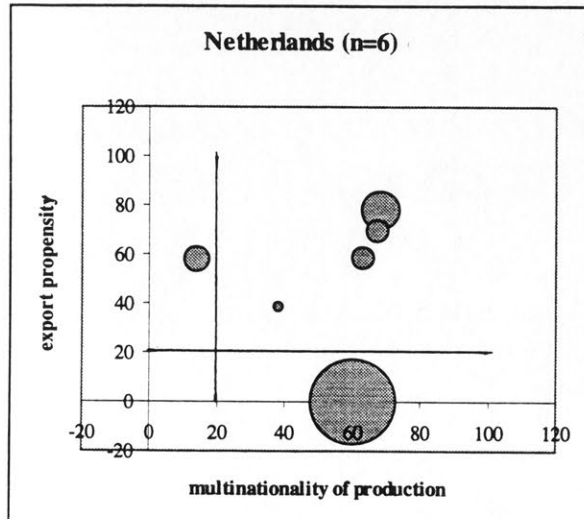
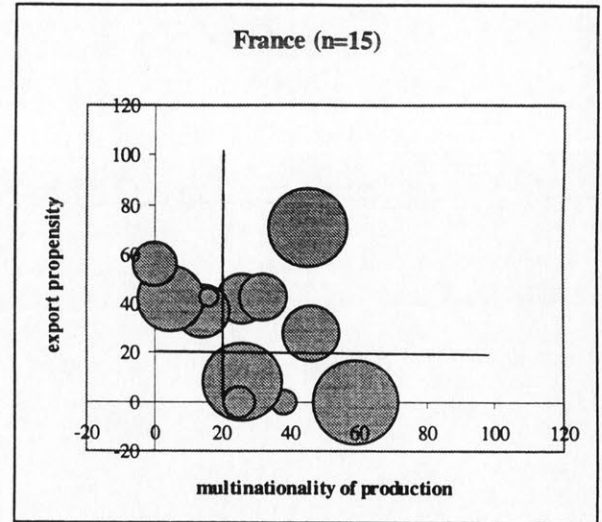
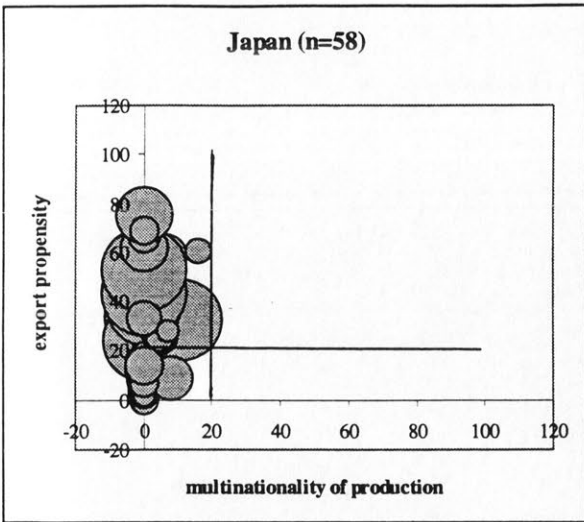
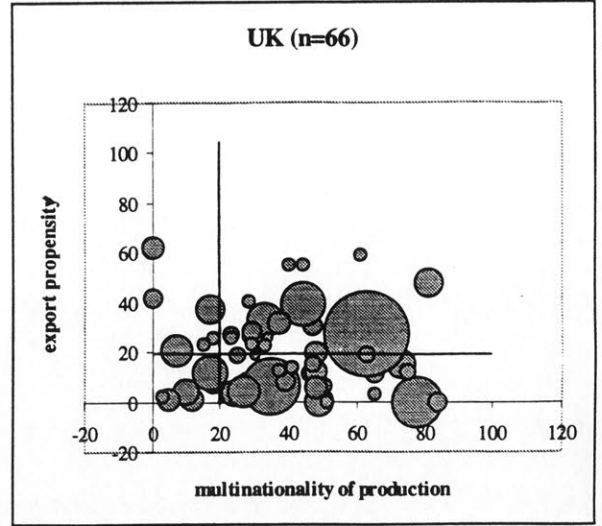
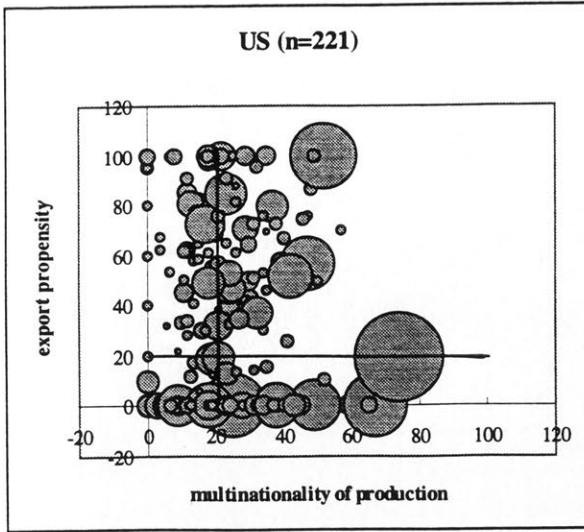


Figure 3.17: Firm size for selected countries



question of whether MNCs of that type exist elsewhere. The taxonomic analysis reported here indicates this to be the case.

Prevailing empirical and theoretical research into MNCs implies that such firms would not exist in large numbers at the global level. The dominant assumptions about stages models of internationalisation would have the foreign producer category in the schema used here unpopulated. The portfolio of large Australian manufacturers provided evidence that some large MNCs had proceeded along a different trajectory in their internationalisation process. The evidence from the 443 firms categorised here suggests that this alternate path is not limited to Australian firms, but is followed by a significant proportion of those MNCs, across countries and industries. The existence of such firms suggests that, for some firms, the decision about how to service a foreign market is not made at the margin between exporting and foreign production as equally feasible strategies, but as a consistent strategic response. In effect, the existing strategy of the firm constrains and directs the strategic choice (Bourgeois, 1980) about the mode of servicing the next new geographic market.

In addition, in the strategic management literature on internationalisation, foreign producers are treated as vulnerable in the face of competition from either a strong local competitor or a coordinated global firm. This rests on the assumption that they operate as multidomestics, running a portfolio of national businesses, with Porter (1990) opining that coordinating such firms exceeds managerial capacity. Given this assumed lack of competitiveness, the proportion of foreign producers among the world's largest MNC is relatively high at 24.8% of the 443 firms.

There is also a question of whether the market servicing choices made by the MNCs identified here as foreign producers will change over time, either because of shifting trends within their industry, or as they "mature" as international operators. The snapshot nature of the data analysed does not permit a direct examination of this issue. The

question is not investigated empirically here because comparable data for later editions of the *World Directory* are not in the public domain.

At the same time, there is some indirect evidence to suggest that firms which appeared in 1981 as foreign producers are not likely to alter their relative mix of exporting and foreign production. It applies to the foreign producers in industries where that is a dominant market servicing strategy and few firms engage in significant levels of export behaviour. There is evidence that patterns of intra-firm trade did not shift markedly for these industries in the 1980s. In devising his index of integration, which used 1982 data, Kobrin (1991) also made some intertemporal comparisons for 30 industries drawing on 1986 survey data. This explicitly recognised the prevailing consensus that levels of global integration had increased through the 1980s. The 1986 data indicated that although there had been an overall increase in the value of the index over all 30 industries, the rate of increase was unevenly distributed. Industries with a high index showed the highest levels of growth, while half of the ten least integrated industries experienced a decline in the index. Significantly, there is little evidence of industries in the least integrated range shifting to the highly integrated range of industry rankings. The industries which emerge here as dominated by foreign producers and lacking significant export levels all fall in this category. Nevertheless, the empirical question of whether foreign producers are still a significant proportion of the world's largest MNCs, and more generally, the direction and magnitude of any changes in the strategic positioning of large MNCs throughout the eighties and nineties, is a subject for future research.

Having established that foreign producer firms exist, one's consideration then turns to the question of how such MNCs compete. In population ecology terms (Hannan and Freeman, 1984), the existence of foreign producers in the ranks of the world's largest MNCs indicates that it is a form of MNC which offers certain competitive strengths. Understanding how that form is competitively successful is therefore the subject of the next chapter of the thesis.

3.5 Summary and conclusion

The findings reported here suggest the value of explicit research attention to the question of effective organisation arrangements to support this chosen international strategy.

Although foreign producers are highly visible in the national portfolio, this categorisation of 443 of the world's largest MNCs, indicates that they are not unique to Australia.

Theory needs to be extended to take account of such firms. The following chapter begins that task, by developing an ideal type for an integrated foreign producer.

Chapter 4

Foreign producing firms: A new ideal type MNC

4.1 Introduction

This chapter begins to fill the gap between the observed foreign producers and the existing literature by describing and defining the characteristics and competitive advantage of a foreign producer as an ideal type of organisational form for multinationals.

In this it addresses two dimensions to the gap elaborated in preceding chapters. The first concerns the relative lack of attention to the organisational arrangements required for effective performance as a foreign producer. Research interest has historically been directed towards other categories of MNCs. Internationalisation scholars have focused explicitly on the organisational configuration required by mixed mode MNCs and the environmental conditions that are most conducive to a global exporter. There has not been equivalent research interest in firms that locate their production in multiple foreign markets rather than export from home or a third country base. However, the analysis reported in Chapter 3 indicates that foreign producers constitute a significant proportion of the world's largest MNCs. Since contingency theory implies that each category of MNC would require a different configuration to support its strategy, addressing configurational issues for the neglected category of foreign producers moves towards theoretical completeness.

The second dimension of the data-literature gap addressed here relates to the discrepancy between the assumed operating mode for foreign producers, as multidomestics, and the operating pattern observed in many large Australian MNCs (Yetton, Davis and Swan, 1992). Foreign producers have conventionally been observed or assumed to operate as multidomestics, with decentralised production locations that are nationally self-sufficient,

and with overseas operations sensing and exploiting local opportunities and developing and retaining knowledge within each unit. However, field research into the Australian foreign producers (Yetton, Davis and Swan, 1992) revealed that they integrate across their dispersed production locations. It indicated not only that the operating gestalt of those foreign producers differs from that of a global exporter, transnational and multidomestic form, but also that it has a distinctive coherence and pattern, suggesting the possibility of a configuration for integrated foreign producers.

Building on the insights generated by the earlier qualitative research, the chapter addresses the data-literature gap by taking the form of a theoretical paper which sets out to show how a foreign producer can be a competitive form of integrated MNC. In defining an ideal type MNC, the chapter is developing theoretical proposals rather than providing a description of existing firms (Doty and Glick, 1994). This theory building is triggered and informed by qualitative inquiry into one set of foreign producers, but not determined by or limited to the behaviour of the originally observed firms.

The ideal type foreign producer exhibits constrained local responsiveness with respect to its product lines and global integration around common production processes and platforms. Porter (1990) provides a powerful rationale for the potential competitive advantage of a global exporter. This chapter attempts to do the same for a foreign producer.

The chapter begins with two brief case descriptions, drawn from field research into nine of the large Australian MNCs, to illustrate how some foreign producers compete in a way that differs from the conventionally assumed MNC models. This is followed by a description of the ideal type theory building approach adopted here. The next section identifies four building blocks of organisational patterns within a foreign producer. How these building blocks in turn combine to deliver the capacities of economies of scale, managing business risk and a solution to global/local conflicts, in a coherent gestalt that differs from the one identified by Porter (1990) for a global exporter, is described in the

following section. The chapter concludes by illustrating these theoretical constructs for a foreign producer with reference to the two illustrative cases.

4.2 Illustrative cases

Because this chapter deals with an organisation form that is not identified within the existing literature, it begins by describing two cases to serve as concrete referent points for the reader - the yeast division within Burns Philp, and the brick division within Boral.⁶⁸ Burns Philp and Boral are two large Australian international manufacturing corporations. Although a single line of businesses from each is selected to describe and analyse as exemplars, the yeast and brick operations are each one unit within related product firms. The descriptions focus on a single unit in order to highlight the operation of a foreign producer gestalt. The intention is to provide an alternative to archetypes that belong to other theories and a frame for the abstract elements later in the chapter.

4.2.1 Yeast division of Burns Philp

The yeast division of Burns Philp,⁶⁹ which is one of the leaders in the world bakers' yeast market, competes as a foreign producer, in an industry where its two major competitors operate as strategic exporters. Burns Philp produces wet yeast (cream or compressed) for local consumption in thirteen countries from nineteen manufacturing plants that have an average annual capacity equivalent to 1,000 tonnes of dry yeast. By contrast, Gistbrocards of Holland and Lesaffre of France export dry yeast, which is suitable for transport over long distances to overseas markets, because it has the advantage of not requiring refrigeration, from facilities of at least ten times that size.

Although it does not capture the manufacturing economies of scale conferred by large single plant operations, Burns Philp does have competitive advantage in terms of cost and

⁶⁸ These two descriptions are representative of the operating patterns observed in the foreign producers originally researched.

⁶⁹ These two case descriptions present snapshots of the firm's operations in 1992. While Burns Philp's corporate performance in recent years has disappointed financial markets, its yeast operation continues to perform effectively.

product characteristics. Dry yeast is more difficult and, therefore, more expensive to produce than the wet varieties. Moreover, removing moisture from the product can damage its performance stability, while large scale commercial bakeries, which are the main customers, look increasingly for low variance in their own product quality, and so demand highly stable yeast characteristics. The consequence is that imported dry yeast provides a price and quality umbrella under which local wet yeast manufacturers, such as Burns Philp, whose costs are lower and product quality more stable, can operate.

The yeast culture itself, factory design and equipment, and manufacturing process management all affect a yeast producer's competitive position. Australian geography, with relatively small population centres separated by large distances, combined with the difficulty of transporting wet yeast over long distances, precluded single large scale wet yeast production facilities to pursue scale advantages. Instead, Burns Philp had focused its six Australian operations on incremental improvements to each stage of the manufacturing process, and had achieved some important production technology innovations. Much of its early development in these areas came from adapting equipment developed for use in other industries to the yeast production cycle. The only other major world yeast producer to build small scale factories, the US company Universal Foods, concentrated on refining and automating existing equipment and processes with only marginal improvements in operating efficiencies.

Burns Philp's rapid and innovative learning was reinforced by management practices that involved rotating regional plant managers every few years and rewarding them on the basis of their performance relative to that of their predecessor. This internal competition contributed to relatively rapid and comprehensive transfer of learning across sites. It provided incentive to take advantage of improvements others had already made, as well as to develop additional ones. This can be, and in this case, was, a win-win game for those involved. In this fashion, Burns Philp's production process became central to its ability to produce highly reliable yeasts at low cost. Consequently plant and equipment specifications and operating procedures are critical to its performance.

By the 1980s then, when the yeast division of Burns Philp was looking to expand overseas, it was natural that it would seek to capitalise on its distinctive competitive advantage by locating small plants in other countries. Within Australia, a company like Burns Philp already manages across large distances before it goes “offshore”. So in many important ways, running San Francisco in the US is just like running Perth in Western Australia. The extent to which a national market is different is primarily managed by taking on a joint venture partner for the first entry into a market, typically as a greenfield site. “In new geographic markets, partners like Westons in the UK, Labatt in Canada, Meisham in China and Bemberg in Argentina provide valuable local input” (Annual Report, 1990). This is consistent with the interpretation of joint ventures as options to expand (Kogut, 1991).

Thus, as a product of its Australian heritage, Burns Philp competed internationally as a foreign producer, while its European-based competitors, whose domestic experience was quite different, expanded differently. For their part, Gistbrocards and Lesaffre could pursue single site economies of scale since their domestic markets accessible by refrigerated truck were much denser. “Export” markets into other European countries also offered proximity and density, whereas for Australia, both domestic and export markets involved distances that precluded single large wet yeast production facilities. Not until they had exhausted expansion opportunities in continental Europe – a market immeasurably larger than Australia's several million, did Gistbrocards and Lesaffre face the issue of how to gain access to more distant markets, beyond the range of refrigerated trucks. At that point, they had already developed dry yeast technology (which Burns Philp did not have at the equivalent stage). Extending the capacity of existing plants to allow for export volumes of dry yeast was the strategy that played most directly to these organisations’ production and distribution strengths.

4.2.2 Brick division of Boral

Boral is one of three Australian firms that dominate most sectors of the local building and construction materials industry. Its international expansion has been concentrated in product areas which are inherently limited in tradeability - including bricks and roofing tiles. In this industry, there are no major exporters equivalent to Gistbrocards and Lesaffre.

Like the yeast industry, the brick industry has remained quite fragmented in many countries, with a wealth of family owned firms. In contrast, in Australia, it became a much more concentrated business during the prolonged housing boom after the Second World War. In that period, Boral developed a national chain of brick plants, in large part through the acquisition of family firms. In the 1960s, as opportunities for further growth in Australia were limited, in part by consideration of trade practices constraints, Boral recognised the opportunity to pursue a similar strategy in the US where the industry was still fragmented. From an initial base of some 6,000 firms with the top four accounting for less than 15% share, the US industry had evolved by 1993 to only 1500 firms.

In acquisition, Boral has tended to maintain the family name for the business, believing that this is not only an element of the purchase price but also a source of value, as a “brand” or “reputation” underpinning long established relationships with local builders and contractors. While the family name remains, the primary focus is on changes not visible to the market. The two steps immediately following acquisition are the most critical. First, a small team of process engineers (including skills in fuel efficiency and surface chemistry) is sent to the plant for an intensive review with two objectives. The first is to see if the acquired plant has any technology or operating know-how which is new to the Boral group. If this can be identified and codified, the process engineering team will then be responsible for testing the know-how elsewhere and ultimately for its international dissemination. The second objective is to transfer to this plant the know-how in the Boral system. This transfer relies not only on the team but also on the immediate

installation of a control system. While it is a routine matter for an acquirer to insist on the rapid implementation of a standardised financial control system, Boral supplements that requirement with an extensive technical measurement system which captures a range of real production variables (inputs, speeds, temperatures, etc.) as well as the more conventional measures of output.

It is conjectured that the technical measurement system is critical to the learning process at Boral. While the financial control system may be thought to impose the discipline of an internal capital market, financial performance will always be a result of market conditions as well as operating effectiveness. A plant may be profitable if there is a localised building boom - with shortage of capacity leading to firmer pricing - and yet be poorly run in a technical sense. Conversely, a plant may be extremely efficient and yet only marginally profitable. The technical measurement system allows Boral to separate process efficiency from other factors affecting financial performance. This not only increases the effectiveness of the centre in monitoring but also systematises the learning process. Any plant which can achieve improvements in key areas will be identified by technical measurement. This serves as an attention-focusing device which targets search in a highly directed way. In effect, the plants around the world compete against one another to establish best practice benchmarks which are then transferred to other plants. They operate within a culture of TQM incremental improvements. In addition, while Boral holds the view that general managers should be nationals of the country concerned, international transfer of middle managers (technical and financial) is a key instrument in the knowledge transfer system.

4.3 Research approach

4.3.1 Qualitative research

The preceding descriptions draw on research undertaken for the Australian Manufacturing Council (Yetton, Davis and Swan, 1992) specifically to provide understanding of the process and pattern of internationalisation of the large locally domiciled manufacturers,

which predominantly adopted a foreign producer strategy. Since traditional models of internationalisation did not bear directly on managing foreign producer firms, case study methodology, with its emphasis on understanding the context and process of organisational operations (George and McKeown, 1985; Galunic and Eisenhardt, 1994), was particularly appropriate. It can guide and inform research into an unexplained phenomenon because of its potential to reveal emergent patterns. It is also an especially useful tool for theory development (Eisenhardt, 1989; Yin, 1994). Finally, the comparatively neglected state of this form of MNC makes case study research useful because of the rich description achieved through capturing multiple data sources and perspectives (Pettigrew, 1990).

The field research into the behaviour of those firms was supplemented by use of a range of international databases such as Vernon's Harvard/CEI comparative multinational enterprise program (Vaupel and Curhan, 1973), the Stopford and Dunning London Business School study of the largest 500 multinational enterprises (Stopford, Dunning and Haberich, 1980), and the comprehensive IUI survey of Swedish multinational manufacturing firms (Swedenborg, 1990). Australian data, including the Bureau of Industry Economics' (1990) survey of manufacturing firms and the Centre for Export Marketing's (1991) study of manufacturing exports were used to compare the behaviour of Australian firms with their international counterparts. Specifically, the effects of firm size and industry, and patterns of location, mode of entry and structure and control systems were considered. Publicly available data on the firms were also examined.

This preliminary analysis formed the backdrop for in-depth interviews with key executives on "how they compete and win", not only to cross-validate the individual findings, such as the effect of firm size, but also to ensure that the findings held together and explained overall firm behaviour.⁷⁰ It is considered important in research of this nature that respondents be willing and able to provide the necessary information (cf.

⁷⁰ A summary of the findings, reported in detail in Yetton, Davis and Swan (1992) appears in Appendix 1.

Campbell, 1955). This means they should be executives of sufficiently high corporate standing to possess the likely expertise and bird's eye view required to furnish an informed perspective of their organisation's international management structure. This condition was met. Over 60 hours of interviews were completed at CEO and other senior policy and technical levels. Questions were deliberately broad and non-directive in order to elicit the world-view and competitive rationale of managers in those firms, rather than to gather evidence for existing hypotheses. Examples of the questions include: how do you make money in your business; what are the most important things you have to manage; to what do you attribute your firm's success?

4.3.2 Contingency approach: Ideal type

The chapter builds on the understanding of an integrated foreign producer form gained from this field research to define a new ideal type MNC. Thus it takes a step on from the empirical investigation to engage in theory building.

The case descriptions suggest that a foreign producer might compete in international markets in a fashion that is different from those identified for mixed mode MNCs (Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989; Hedlund, 1986; Kogut, 1985a,b) or global exporters (Porter, 1990; Yip, 1992). This observation is consistent with contingency theory, which holds that different strategies require a different organisational configuration in order to be effective. As noted in Chapter 1, contingency theory approaches have dominated both the strategic management and organisation theory fields, and are evident in internationalisation research. The common proposition shared by contingency theories is that organisational performance is a function of the fit between two or more factors, such as organisational environment, strategy or structure (Van de Ven and Drazin, 1985; Fry and Smith, 1987). Therefore the best way to organise will vary under differing conditions. From a contingency perspective then, one would expect each of the four categories of MNC identified by the schema, described in Chapter 2 and applied to a set of the world's largest MNCs in Chapter 3, to require distinctive

organisational arrangements. Specifically, a foreign producer strategy for servicing foreign markets would need a different set of organisational systems and controls than one based on servicing foreign markets by global exporting.

Strategy and organisation theory researchers have used different conceptualisations of fit. Three categories of contingency research are identified by Van de Ven and Drazin (1985). The earliest interpretations of fit held that organisation design should adapt to the characteristics of its context, usually elements of the external environment, in order to be effective (e.g. Perrow, 1967, 1970; Tushman, 1977) and did not explicitly examine performance. Subsequent research focused on the dependence of organisational performance on the interaction of pairs of context and design factors (e.g. Child, 1974; Khandwalla, 1974). The third and final set of contingency research identified by these reviewers is the systems approach to fit, which defines fit in terms of consistency across multiple dimensions of organisation design and context (e.g. the typologies of Miles and Snow, 1978; and Mintzberg, 1979). High levels of fit are measured by the extent to which an organisation is similar to an ideal type along multiple dimensions. Proponents of this approach argue that multivariate configurations of strategy and environment with organisational processes provide more complex, and therefore, more useful, explanations of complex organisations than bivariate descriptions (Hambrick, 1984; Miller, 1986, 1987, 1996; Doty, Glick and Huber, 1993; Van de Ven and Drazin, 1985).

It is this latter configurational approach that is adopted here, in building theory for an ideal type of foreign producer MNC. Ideal types, which are an accepted basis for building a theory about organisations (Doty and Glick, 1994; Miller, 1996; Gresov and Drazin, 1997), often form part of a typology which identifies multiple ideal types, each representing a distinctive combination of the organisational attributes that are considered to generate the relevant outcome (e.g. performance). Weber's (1949) concepts of charismatic, traditional and bureaucratic authority are perhaps the best known. Other examples of typologies are Mintzberg's (1979) distinction among adhocracy, simple and

mechanistic and professional bureaucracies and Miles and Snow's (1978) firm types of prospector, analyser, defender and reactor.

As theoretical abstractions of organisations that are intended to be maximally effective, ideal types are not an empirical description. Rather, they provide a basis for explaining performance - an existing organisation's deviation from the ideal type would be associated with lower levels of performance. Typologies are therefore distinct from classification schemas or taxonomies. Chapter 3, for instance, applies a classification schema based on choice of foreign market servicing strategy, to the world's largest MNCs. In this fourth chapter, the theoretical questions of the nature of a configuration, or ideal type that will generate maximal performance for one of those categories of firms, is the focus.

Typologies identifying multiple ideal types also rest on the premise of equifinality - that multiple different organisational arrangements can result in the same level of performance, even if the organisation faces the same contingencies (Galunic and Eisenhardt, 1994; Hrebiniak and Joyce, 1985; Nadler and Tushman, 1989; Van de Ven and Drazin, 1985). This is supported by Doty, Glick and Huber's (1993) finding that complex organisations with different configurations may achieve equal performance because of the coherence of the ensemble rather than because of the fit of a specific design with external demands (Miller, 1992; 1993).

Drawing on sociological theory, Gresov and Drazin (1997) argue that the crucial requirement for fit and, therefore, for performance is functional equivalence. A distinction is drawn between "functions", which are indispensable for the organisation's capacity to meet environmental demands, and "structures", which are the organisational arrangements or patterns that allow it to perform a "function". A range of different structures may fulfil the same function. In this way, the environment determines the function(s)⁷¹ an organisation must perform, but not its structures. The chapter utilises

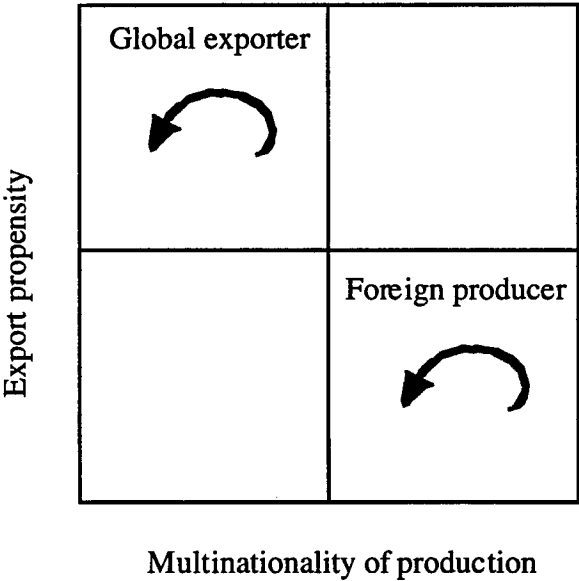
⁷¹ Gresov and Drazin (1997) also suggest that firms may choose which of the functional demands they will aim to meet, thereby exercising strategic choice (Child, 1974). This is echoed in some of the

these concepts to construct a foreign producer ideal type. It identifies four “structures”, which are here termed building blocks, that allow the organisation to preform three “functions”, required by the environment, and which are here termed capacities.

In a complete typology, the particular form of organisational pattern for each of these building blocks would be described. Here, however, it is a single ideal type, for a foreign producer MNC, rather than a complete typology for MNCS that is being proposed. The emphasis is on the overall configuration and coherence of a foreign producer strategy for serving foreign markets and organisational arrangements.

Nevertheless, in order to articulate the construct of this firm type, contrasts are drawn with an implicit global exporter ideal type⁷² which exists in latent form in the strategy and organisation theory literature. Figure 4.1 illustrates this comparison in terms of the firm categories used in the thesis.

Figure 4.1: A comparison of ideal types



internationalisation research. For instance, the Prahalad and Doz (1987) framework assumes that within a single industry, individual competitors will perceive the industry pressures (for global integration and local responsiveness) differently, and then enact strategies that align with/reflect their perceptions of the environment.

⁷² The comparison is made with the global exporter rather than with the mixed mode MNC because Porter’s articulation of that form relates to business unit level strategy, as does the foreign producer form. The comparison with mixed mode MNCs would be less direct since much of the research that examines mixed mode MNCs emphasises scope issues at the corporate level for complex diversified MNCs (eg Bartlett and Ghoshal, 1989; Kogut, 1985a,b).

As such, the chapter applies the constructs that form the building blocks for the ideal type to both a foreign producer and global exporter. Identifying the outline characteristics of a global exporter ideal type both illustrates the variation that occurs on the first-order building blocks, and provides a counterpoint for the explanations of the internal consistency of the underlying processes within the foreign producer ideal type. The focus is, however, primarily on demonstrating the internal consistency among the building blocks for the foreign producer ideal type.

The consistency of a global exporter gestalt is described by Porter (1990). In his conceptualisation, the “global” form is an ideal type whose competitive advantage is based on environmental factors, which Porter generically terms the home market “diamond” (demanding customers, rivalry, factor conditions, and supporting industries). These factors create responses within the firm that generate innovation and efficiencies. The foreign producer is modelled here as an orthogonal ideal type emphasising the contribution of organisational factors to their competitive advantage: intra-firm competition, multiple plant learning, continuous incremental change, and selection of conducive environments.

4.4 Building blocks

The chapter now turns to describing the organisational arrangements adopted by a foreign producer and a global exporter for each of the four building blocks. The subsequent section will show how the patterns combine to form the same three capacities, made up in very different ways.

A foreign producer is characterised by constrained intra-firm competition, multiple loci for learning, continuous incremental change and selection into conducive environments. By contrast, a global exporter relies on inter-firm competition, a primary single locus for learning, discontinuous change and responsiveness to environments. Table 4.1 summarises the building blocks and comparisons.

Table 4.1: Comparison of building blocks

Building block	Foreign producer	Global exporter
Competition	Intra-firm	Inter-firm
Innovation	Multiple loci	Single locus
Change	Continuous	Discontinuous
Environment	Selecting into	Responding to

For each dimension, the traditional theoretical approach, as apparent in a global exporter form, is contrasted with alternate characteristics and underlying theory for the foreign producer form. The intention is to portray how a foreign producer achieves competitive advantage in a manner that is different from a global exporter. Accordingly, the description of these four building blocks articulates the comparative ways in which a global exporter and foreign producer form each compete around the same agendas. The subsequent section, which addresses how these building blocks combine to create capacities, concentrates on describing the coherence of a foreign producer gestalt.

4.4.1 Competition

For the global exporter Porter (1990) sees competition as a powerful determinant of behaviour, which can operate for good or ill. Competition between firms, especially domestic rivals sharing the same home base, provides the critical stimulus to each firm to perform at a high level and to innovate if it is to survive and prosper: “In global competition, successful firms compete vigorously at home and pressure each other to improve and innovate” (Porter, 1990, p. 117). Indeed, Porter sees keen domestic rivalry within an industry as almost a precondition for the creation of internationally competitive firms. Within the firm however, he emphasises coordination. Physical distance, linguistic and cultural gaps and self-interest combine to thwart the speedy open information flows that drive innovation for a global exporter. Thus the problems created by dispersed production locations would militate against the gains generated by keen domestic rivalry.

In a foreign producer ideal type, by contrast, dispersed production units compete within the firm rather than with an external entity. The theoretical argument is that the critical role of competition as a performance enhancing mechanism need not be limited to competition between firms in a market, but can usefully be extended to competition between individuals or units within a firm. This competition would, however, be constrained, through a tournament process that judges performance in terms of how well each unit runs the specified race (manages the production process for a product) rather than how adept each unit is at picking from a range of races (choosing or developing better products). Competition in markets is often constrained, for example, by laws regulating claims or seeking to ensure that promises/guarantees can be met. So too, it is suggested here that competition within the firm must be constrained to be effective. For example, internal organisational laws are required against deliberate withholding of information. In the case of Boral, for instance, performance information is transparent to all players.

Proposing that intra-firm competition may nonetheless be a powerful force for performance extends the concept of labour market models of tournaments (Rosen, 1986) to internal competition among organisational units of the same firm. This model has particular application in professional expert organisations, in such fields as consulting and professional practice (Galanter and Palay, 1991). In these organisations, the rules of competition emphasise how everyone can and will be rewarded. In effect, the firm creates a multi-period reward system to avert the threat that competition for promotion will take destructive forms (e.g. failure to cooperate, hiding of information). As Axelrod (1984) has eloquently demonstrated, cooperative behaviour can be elicited in repeated games, even when each player is acting in competitive self-interest.

It is suggested here that where a firm has a number of comparable units which rely on a common technology platform (e.g. retail outlets, brick plants), it can devise a process of constrained intra-firm competition. In this context, the guiding principle is that unit managers compete for recognition and reward (e.g. managerial promotion as in a

tournament) and for resources (capital expenditures, R&D) as surrogate profits. This competition is judged, not so much on the basis of the level of performance of their particular unit relative to other units, but rather by the contribution made to improved performance of their unit against its performance in the previous period. Under such a regime, managers are motivated to exchange information and process improvements which reduce their costs and/or raise their performance. They compete to exceed, and therefore become, best practice across the network. This predisposes them to create win-win games in which all can succeed. Additionally, no manager can be successful long term without actively cooperating with others. In this way, the design of the reward system and its underlying multi-period structure induce cooperative behaviour from competitors, especially in the sharing of information (e.g. process technology changes) of potential benefit to others. Certainly, Burns Philp used this as a powerful motivator of its domestic business unit managers.

Economists have long recognised that inter-firm competition enhances performance only under appropriate conditions, particularly clear and enforceable property rights and information availability. Similarly this chapter posits that competition between operating units within the firm enhances performance only when the internal rules stimulate search for improvement and reward transfer of information across the firm. As a critical support to this well-informed internal market, the firms initially studied placed high emphasis on the transfer of people between locations as carriers of critical tacit knowledge, which itself facilitates sharing of newly generated knowledge.

4.4.2 Innovation

While acknowledging that dispersion of firm activities to many locations might provide a learning stimulus, Porter (1990) singles out a firm's home base as the genesis of real innovation. In his analysis, it is essential to bring together in one place not only the firm's core innovating functions (R&D and production) but also the many interacting players - rivals, suppliers, research institutes, demanding customers - who collectively

create the environment and the pressure for innovation. “Proximity increases the speed of information flow within the national industry and the rate at which innovations diffuse....Proximity raises the visibility of competitor behavior, the perceived stakes of matching improvements, and the likelihood that local pride will mix with purely economic motivations in energizing firm behavior. ... Proximity, then, elevates the separate influences in the ‘diamond’ into a true system”(1990, p. 157).

While this is an elegant, and persuasive, stylised model of innovation, other organisational patterns of learning may also prove competitive in certain circumstances. Specifically, an ideal type foreign producer would have high opportunity to learn because of its multiple locations, and high motivation because it has regimes in place which allow the gains to be extended across all sites. Its search process is a continuing decentralised quest for small but cumulative process innovations, within a structure that maximises the potential for long-term adaptive behaviour.

In a world of certainty, perfect information and common access to intellectual property, there would be no learning - and no incentive to invest in learning. In the simplest stylised models of perfect competition, for example, the firm is on the production frontier or is bankrupt. In contrast, the focus here is on the purposeful behaviour of the firm - in its endeavours first to survive and then to establish a competitive advantage in an uncertain world.

With uncertainty and imperfect access to information, both the opportunity and the incentive to engage in deliberate search and problem solving increase. A prime determinant of the opportunity (or even necessity) to learn is heterogeneity of the environment. One form of heterogeneity occurs in customer need, and most particularly in the sophistication or difficulty of those needs - the key role of leading edge users in innovation literature (Von Hippel, 1988) is an example. Porter (1990) has suggested an analogous role for “selective factor disadvantages”, which challenge some firms in an industry to change the technology or product design to overcome this disadvantage that

threatens their survival. By extension, it is noted that an MNC is more likely to encounter a heterogeneous environment than would a competitor located in a single market - heterogeneity of customers and of factor conditions both increase.⁷³

Not only opportunity, but also the motivation to engage in purposeful problem solving are greater in the case of a foreign producer firm. Economists have emphasised the critical importance of the appropriability regime in determining the incentive to invest in research (Arrow, 1962; Teece, 1980). This logic is extended here to all investment in learning. The case where property rights allow the firm to exclude all competitors from use of knowledge (by patent, copyright or other law) is clear cut. There is, however, also an incentive to invest in learning even though competitors cannot be excluded, if the firm is better able to capture the benefits of the investment than its competitors. The increasing acceptance of the idiosyncratic nature of the firm (Henderson, 1989) which is affirmed by the resource based perspective (Wernerfelt, 1984; Collis, 1991; Barney, 1995) elaborates the importance of barriers to the transfer of knowledge between organisations. This is particularly so when knowledge is tacit and embedded in organisation routines (Nelson and Winter, 1982) which give rise to conditions where competitors are unable to be confident that they understand and hence can replicate the knowledge (Lippman and Rumelt, 1982). But this incentive is reinforced if there is a difference in scale between the learning firm and its competitor. While the cost of search may be assumed to be the same, the benefit in many cases will be directly correlated with scale.

A foreign producer is a case in point. Operating in several markets and with multiple production locations increases the heterogeneity of the environment and the opportunity to learn relative to the single locus firm. At the same time, the incentive for the firm to learn in one of its locations will be greater if the firm is able to develop effective mechanisms to codify and transfer that knowledge between locations. Boral, Burns Philp and the other observed firms which operate as foreign producers are concentrated in

⁷³ It is interesting to speculate whether the different conditions across Australia's internal markets have contributed to both Boral's and Burns Philp's performance in this way.

industries characterised not so much by large-scale centralised research and development as by a continuing decentralised search for minor but cumulative process innovations. They correspond quite closely to Nelson and Winter's (1982) "cumulative technology regime", in which innovative success buys a firm "not only a better technique, but a higher platform for the next period's search". In this case, the incentive for the larger scale (multi-plant) firm to invest in learning increases the effectiveness of the mechanisms it establishes to codify learning and transfer it between locations. Moreover, the appropriability of process innovation may well be higher because it is not directly observable by competitors. By contrast, product innovation sends a direct signal and focuses competitive attention. Further, if the search process is driven in some cases by Porter-type (1990) selective factor disadvantages (e.g. very high energy costs or pollution control requirements in one country), learning the solution (or improving the platform) is less likely to be imitated in other environments where the problem is less salient. While the benefit of any particular innovation may be small, the cumulative advantage may be highly significant.

Beyond the opportunity and the incentive lies the issue of the firm's capabilities to learn. Here, too, it is hypothesised that a foreign producer can be structured in such a way that it closely matches the central conditions required in the behavioural theory of the firm for long term adaptive behaviour (March and Simon, 1958; Cyert and March, 1963). First, the "tournament" competition for performance between similar units can be constructed in manner that creates a continuing level of reasonable stress to engage in search for improvements. Second, each plant is likely to have a difference in its focus of attention as a function of its local environment and learning - at an organisational level, these marginal differences lead to increased probability of "Eureka" effects. Third, each plant will tend to experiment by changing one element of the production process at a time. Sequential approaches to problem solving improve the probability of success because causal ambiguity is low and feedback is direct and relevant. Fourth, the parallel search process conducted by multiple units generates a rich repertoire of action programs, each of which

deals with a restricted range of situations and consequences. Since each action program is limited in scope, it can be more easily communicated to other units and can be implemented without the major risk generated when an organisation attempts to change too many variables at the same time.

4.4.3 Change

Porter describes his “fundamental perspective” as more Schumpeterian than neo-classical (1990, p.778 n.1.6). Innovation (i.e. change) is represented as a wrenching and unnatural activity for firms, with dynamism usually maintained only because of dynamic characteristics within the national environment.⁷⁴ This emphasis on discontinuous change rather than continuous incremental change may be rooted in part in the central place accorded industries characterised by the race to launch successive product generations: information technology, equipment, instruments, transport vehicles. Perhaps because he deals at the level of nations, with a systemic focus, Porter does not directly address the associated issue of risk management at the firm level; specifically, how a particular firm manages, or at the limit survives, “wrenching” innovation.⁷⁵

By contrast an ideal type foreign producer would focus specifically on continuous incremental change, which has the advantage of being easily adopted across all their locations. In the absence of high levels of embodied technology, the benefits of production technology changes can be captured without building a complete new plant. Burns Philp for instance demonstrates the capacity to improve each part of its production process incrementally.

The Porterian view is consistent with much of the extensive change literature, which focuses on the problems associated with managing large-scale discontinuous change. One stream focuses on the process by which firms move into misfit to the point where they

⁷⁴ He argues, however, that small firms and outsiders are the ones who play the role of engines of creative destruction (1990, p.788 n.3.59).

⁷⁵ In a footnote, Porter suggests that “while this risk [that new firms would inevitably overcome past leaders] is indeed present, firms that are able to maintain dynamism, usually because of a dynamic national environment, can sustain leadership for many decades” (1990, p.807 n.11.2).

need to undertake major restructuring to regain fit (Donaldson, 1987). The separate work of Miller and his colleagues (e.g. Miller and Friesen, 1984) and Tushman and his colleagues (Tushman and Romanelli, 1985), which focuses on punctuated equilibrium and change, reinforces that literature. They argue that organisations typically undertake large scale discontinuous shifts following lengthy periods of relatively stable equilibrium. At the same time, the strategic management and organisation theory literatures have long held that changes in business strategy precede changes in structural adaptation (Chandler, 1962; Rumelt, 1974; Donaldson, 1987), with the latter driving a realignment of management processes (Miles and Snow, 1984). The calls for competitive positioning routinely emphasise envisioning a new strategy, which often then involves major organisational transformation to implement. The leadership literature on vision and transformational leadership arises in this context of large scale discontinuous change.

However, managing change of this nature involves a range of problems that the change literature leaves largely unresolved. The problems derive partly from the incompleteness of the vision, partly from the scale of the transformation and the interrelatedness of elements within it, and partly because the efforts may not yield significant results until most of the change is in place. The high risks and delayed payoff results in a preoccupation with managing the change itself. Determining how to disaggregate the vision into its component actionable elements and devising a workable schedule are daunting tasks. The usual response is a combination of planning and process activities designed to coordinate across and to generate ownership within the system.

Although this is the predominant normative approach to change, there is some evidence that incremental continuous change is a better descriptor of organisational change than are major discontinuous strategic shifts (Nonaka and Takeuchi, 1995). Critics of rational approaches to strategy formation have consistently pointed to gaps between observed practice in organisations and the descriptive and normative theories of strategy development and implementation (Lindblom, 1959; March and Olsen, 1976; Quinn, 1980; Weick, 1987; Mintzberg, 1990, 1991). They argue that strategy formation is more

an emergent than rational process, involving small steps which provide information and a new basis for action and which, over time, gradually foreclose alternative courses of action and limit what is possible. Thus, instead of strategy preceding and determining structure and the other elements of fit, the whole configuration evolves together.

Here, this view is endorsed, and it is also suggested that incremental change can be more effective and substantially lower risk for organisations. Specifically, it is proposed that continuous incremental change in many cases provides a more reliable change process for firms, without necessarily foreclosing the potential for competitive repositioning. It seems reasonable to assume that organisations would prefer moderately certain incremental gains of 5 to 10% a year over a five year period to a highly uncertain one-off gain of more than 50% over the same period. While most change authors acknowledge the wrenching nature of discontinuous organisational change and the high risk level associated with it, they do not usually specifically address the issue of organisational capacity to deal with such high risks.⁷⁶

The dominant approach to organisational change carries an implicit assumption that incremental change, typically process improvement, may lock an organisation into a position that has ceased to be competitive. An alternate path to competitive repositioning may be dynamic improvement, where the focus would be on moving within a frame of strategic intent that builds evolving competences and allows new strategic possibilities to unfold, which the firm is then in a position to exploit (Craig and Yetton, 1992).

Proceeding in this fashion, organisations would effectively partition the total risk of ultimate transformation into a series of smaller, manageable risks. Thus, at any one time, the threat to the business from the change process would be low. By spreading risks over time, and dealing with them sequentially, the firm would be protected from potentially adverse consequences. Managing the process in this way means that potential performance variance would always be low relative to both the financial and management strengths of the firm (Yetton, Johnston and Craig, 1994).

⁷⁶ See Craig and Yetton (1992) for a discussion of this in regard to business process reengineering.

4.4.4 Environment

Porter places considerable emphasis on the environment firms encounter, particularly in their home base where the critical innovation function is located: "...There are sub-environments in different nations (and in cities or regions within nations) that are more favourable ones for innovation. In biological terms, some habitats lead to stronger or more resilient species..." (1990, p. 174).

Since the location of home base is set by history and may have been a chance event, Porter sees the environment playing a decisive role in selecting firms. If successful, the firm then has a restricted decision as to where and how it competes. To move home base is almost unprecedented and entails enormous risk. So a global exporter develops a product range primarily in response to home base needs and capabilities and then effectively proceeds to offer this product range to "...many, if not all, of the nations that represent significant markets for its product. This creates scale to amortize R&D costs and to allow the use of advanced production technology" (1990, p.54). Although Porter recognises that, over time, foreign direct investment and exports are often complementary and that there are questions as to where to locate activities, the firm has little evident choice as to where it competes. This is consistent with the typical contingency view which posits fitting a firm's strategy to its environment.

For the foreign producer ideal type, the whole world is treated here as a potential environment from which firms will choose to enter only those (national) domains or sub-environments in which they have an advantage. The assumption is that an organisation selects environments in which not only its strategy, but also its structure and management processes, are a good fit and, therefore, in which both the anticipated value of its performance is high and the attendant risk is low. Geographic diversification can meet this criterion more consistently than moves into related or unrelated product niches. The decision also typically involves tapping existing market demand rather than developing a market. This approach draws in part upon, but differs significantly from, the population

ecology and many contingency models, which implicitly treat the environment as a factor that contains the firm, and acts upon it, or that can be adjusted only slightly from within. The process suggested here is one by which an organisation partially endogenises the environment by deciding where to engage.

The concept of selecting environments for which the firm is well fitted implies that the selected sub-environment is not necessarily an exogenous variable. It then also follows that the experienced environment is less complex as a consequence of sub-environment selection. A foreign producer, for example, only enters environments which keep its complexity low. Choice of an environment is determined by the elements that are global and common (production processes and the inter-plant network). These are then partitioned and handled differently from those aspects which are specific and local (marketing, and sales and distribution networks). By contrast, multinationals which entered environments for other reasons find themselves experiencing a complex environment. This is consistent with contingency theory, which would suggest that mismatch between structure and environment manifests as a high level of complexity rather than simplicity (Miles and Snow, 1984; Gresov and Drazin, 1997). This analysis therefore calls into question the assumption that the complexity faced by mixed mode MNCs is an independent property of the environment, and suggests it may be a joint consequence of the positioning of the firm within the environment.⁷⁷

4.5 Capacities

These four building blocks then combine in varying distinctive ways to generate three key performance characteristics, or capacities, which help a foreign producer succeed in an international competitive environment. Specifically, an ideal type foreign producer

⁷⁷ Interestingly, in recent empirical research testing Prahalad and Doz's categories of MNCs, Johnson (1995) comments in passing that firms which categorise themselves as locally responsive "apparently enter markets that naturally fit their style of operation. Rather than adapt to local markets that do not fit their established strategies, these businesses may choose markets based on their match with the firm's strategy. They are only responsive in the sense that they respond to a homogeneous set of needs across borders." He concludes that such firms might better be described as limited in their response rather than local in their response. He goes on to note that this suggests a refinement of the Prahalad and Doz (1987) categories.

achieves economies of scale across plants through multiple plant learning, continuous incremental change and intra-firm competition. This contrasts with a global exporter's economies of scale at a single plant, typically driven by high share of large (i.e. global) markets. Further, a foreign producer manages the business risk involved in entering new geographic markets by selecting into environments and pursuing continuous incremental change. For a global exporter risk is minimised by being domiciled in a nation with a strong diamond.⁷⁸ Finally, a foreign producer resolves the conflicting demands of global integration and local responsiveness by decoupling product and process, whereas a global exporter resolves that tension by decoupling the value chain, typically separating product development from sales and distribution.

The following sections describe how the basic elements constituted by the building blocks outlined above coalesce in different combinations to allow a foreign producer to perform the functions, or capacities, required by the environment. As foreshadowed earlier, the emphasis here is on the gestalt of a foreign producer, with only occasional comparisons drawn between this ideal type and that of a global exporter.

4.5.1 Economies of scale

The multiple plant economies of scale captured by a foreign producer differ from the economies of scale that arise from concentrated production in a single large-scale plant. A global exporter can focus on developing the next product in reaction to the needs of key (demanding) customers, using a large centralised R&D function and then distributing the product to global scale (large) markets.

By contrast, an ideal type foreign producer generates economies of scale across multiple plants. Because they are characterised by the primacy of the technological processes and multiple incremental changes, the leverage is achieved not by scale in a single plant, but by applying all innovations across all plants. Managers are motivated by competition to

⁷⁸ For instance, sophisticated customers combined with rivalry ensure a firm develops products for which global demand will be high.

seek out innovations, and the diversity of environments increases the range across which innovations may occur. The managers themselves provide a range of variation in skill sets across different locations in response to specific characteristics of the local environment, while different suppliers, for instance, may make varied suggestions to improve operating effectiveness of their products. Once the innovation has occurred in any one location, it is transferred through the system. Thus a foreign producer captures leverage around innovation through the combination of intra-firm competition, multiple plant locations and continuous change. This has an equivalent effect in terms of global efficiency to a traditional single plant scale effect. The economies of scale result in both operating efficiencies and increased rates of process innovation, which in turn may improve the sophistication of the potential product offering.

This different form of dynamic economies of scale available to multi-locational organisations has been recognised as a conceptual possibility in both the management theory and strategy literatures. For instance, Bartlett and Ghoshal (1989) acknowledge a range of forces for global integration. These are common customer preferences across countries; economies of scale, scope and national comparative advantage which create incentives for specialisation and interdependence; capacity to transfer or adopt knowledge developed in one environment in another; and the existence of many transnational clients, suppliers, competitors and even regulatory agencies in the MNC's environment.

At the heart of this concept of global integration is managing interdependencies between dispersed operations within a step of the value added chain. Local autonomy is curtailed in order to achieve one of two outcomes. The first is global standardisation⁷⁹ of activity, in order to achieve scale efficiency. The second is global balance in the interaction between units, in order to provide maximal use of a differentiated, geographically dispersed resource base.⁸⁰ The literature on configurations for mixed mode MNCs

⁷⁹ In R&D this is often achieved primarily through centralisation.

⁸⁰ This might include access to low cost raw materials or labour, customer demand, advantageous currency movements, or the capacity to strike at competitors in multiple markets (Kogut, 1985a; Bartlett and Ghoshal, 1989).

focuses primarily on standardisation of product⁸¹ and coordinated interactions between specialised production units, reflected in intra-firm trade flows. In order to achieve balance in the interactions, local autonomy is constrained to allow coordination of the flow of parts, components and finished goods between dispersed manufacturing operations which have specialised roles. Standardisation of process is downplayed or overlooked.

With the focus on the foreign producer, here, the chapter emphasises that neglected form of global integration, arguing that a foreign producer may achieve performance gains by imposing a different kind of coordination across dispersed production locations. Because the dispersed units replicate the core production process, local autonomy is constrained with respect to a specific set of decisions within the production step of the value chain. The outcome of this form of global integration is cumulative production process change. Scale efficiencies are realised by amortising the costs of innovation across a production platform that is standard across locations.

The neglect of this form of global integration is most evident in the conventional treatment of a range of industries that are routinely dismissed as not capturing the benefits of integration. For instance, Ghoshal and Nohria (1993) deny for the cement products industry the central role of knowledge developed in one environment which is transferable or adaptable in another for firms with dispersed production locations. It is cited as an example of the combination of weak demands for both local responsiveness and global integration: “cement products are highly standardised, and marketing and distribution systems are similar across countries. Thus demands for local responsiveness are weak. However, the trade-offs between the economics of cement production and transport costs are such that global integration is not attractive” (Ghoshal and Nohria, 1993, p. 26). By contrast, the observed Australian foreign producers include at least one cement producer which continues to expand internationally in the belief that it can learn

⁸¹ The emphasis is on scale efficiencies that arise from product (or marketing) standardisation.

and transfer learning effectively. To cite a specific instance, that firm considers its computer controlled systems for loading cement trucks a source of competitive advantage, and one that can be extended across all its units.

Accordingly, the chapter suggests that although the economics of production and transport in some industries dictate multiple plants, it does not necessarily follow that global integration is not attractive. Instead, economies of scale are conceptualised as a multi-plant phenomenon, embedded in production processes rather than in the product itself. This involves distinguishing between local responsiveness that is embodied in product and service adaptation to meet local needs, and global commonality of a basic process technology. The approach of the observed foreign producers exemplifies this distinction. The former Chief Executive of Boral, for example, noted that “there is a fashion element to the brick business”. He elaborated this to point out that, although there are regional differences in colour and shape preferences, these aspects of local responsiveness have essentially no impact on the 90% of the value chain that the customer does not observe.

While Porter (1990) assumes it is virtually automatic that firms with dispersed production locations will fail to exploit operating flexibility and to develop corporate, as opposed to subsidiary, resources in the long run, Kogut acknowledges that this is a choice: “Whereas localised learning may be fruitful, there are significant operating costs in allowing subsidiaries to evolve along uncoordinated paths. Both the management of operating flexibility and the corporate development of the option value inherent in multinational resources require a strong and activist role for headquarters and the creation of integrative operating systems” (1990, p. 63). The ideal type foreign producer form proposed here is an organisation form that effectively exercises this choice.

The concept of gaining competitive advantage by accumulation of non-tradeable, industry specific assets of uncertain imitability (Lippman and Rumelt, 1982), or developing core competences, is generally accepted (Prahalad and Hamel, 1990; Verdin and Williamson,

1992). These core competences should allow the firm to increase the speed and reduce the cost of further asset accumulation (Verdin and Williamson, 1992). The multiple plant learning experience of an ideal type foreign producer is consistent with this. For example, a foreign producer is in a position to develop core competences in plant design, construction and operation. Leonard-Barton's (1992) case study of the Chaparral Steel factory as a learning laboratory provides a close parallel to the process by which learning becomes embodied in the technology and operating regimes of a foreign producer's plants. Chaparral Steel however only operates one factory, whereas a foreign producer has the opportunity to develop and embed these core competences across multiple plants.

Although there is evidence that this cumulative effect of minor technical changes can be greater than that of major ones (Hollander, 1965), the diffusion of incremental innovation in firms and its effect on operating improvement is little studied. The research that has examined the diffusion of minor innovations has tended to concentrate on diffusion between firms or across industries (Johnston and Leenders, 1990). The closest analogy is perhaps Epple, Argote and Devadas' (1991) study of the knowledge transfers across time and shifts within a plant. Their findings suggest that a foreign producer's combination of embedding knowledge in technology and procedures and rotating or otherwise moving experts should maximise the transfer of learning across sites. Other research (Zimmerman, 1982) has found an industry effect in the transfer of learning in the construction of nuclear power plants and a stronger firm effect, which also tends to confirm the learning gains in plant construction a foreign producer exhibits.

A foreign producer's approach to learning across sites also diverges from the world wide innovation processes Bartlett and Ghoshal (1989) identify. In the transnational, each unit contributes its unique resources to develop a corporate-wide response to a world-wide opportunity. This evokes a divisional structure with different specialised capacities geographically dispersed, and requiring coordination in different ways for each innovation, because they contribute differentially on each round. In a different fashion however, a foreign producer can also harness the benefits of world wide learning. By

contrast with the transnational, each unit within a foreign producer replicates the whole capacity, so the coordination of different expertises is embedded in routine operations, and constantly upgraded incrementally. In this environment, the potential for the tournament and inspection process to provide a mechanism by which a foreign producer learns is also enhanced. In this instance, learning consists of making multiple small improvements and transmitting them to all other locations.

One of the main differences between these two conceptualisations lies in the distinction between the continuous incremental process innovation of a foreign producer and the discontinuous product innovation which is often a goal for a transnational. Another appears to be an implicit assumption of centralised capacities, either at headquarters, or increasingly located in other subsidiaries in the transnational model.

In this fashion, the building blocks of intra-firm competition, multiple plant locations and continuous change coalesce to form a coherent set of organisational arrangements that provide multi-plant economies of scale.

4.5.2 Managing business risk

A second outcome of the operating patterns that emerge from a foreign producer's building blocks is the minimisation of business risk. A foreign producer only selects local environments where it can replicate its structure, and both the product it globally has the capacity to produce and the type of local partner who is available or willing to enter into a deal provide a fit. A consequence of this is that each time a foreign producer enters a geographic location, it is only taking one new step, which limits the risk involved in that extension, because the firm is transferring much that is stable. Thus the skills a foreign producer has are those required to identify and acquire partners or locations, and then install and operate a plant to its common standard.

The intersection of location and environment provided by putting the next plant where the environment will support it results in a foreign producer taking only one risk at a time as

it expands into new locations. In selecting an appropriate environment, a firm avoids the risks of newness (Hannan and Freeman, 1977), since it is already by definition a survivor in that general environment. The one remaining risk is the new geographic location, not the production technology, or the need for the product. The other differences related specifically to that new location are resolved by buying another (local) operation that has already solved those, or, in the case of greenfield sites, by acquiring a local joint venturer who has already solved them in their existing local business operation.

At least two of the other Australian firms studied have an explicit “one risk at a time” investment criterion. The concept of risk here is qualitatively different from that used in financial markets and the theory of financial economics, where risk is an unknown outcome from a known probability distribution which the investor cannot control. In the context in which it is used in this chapter, managers see risk as controllable, and not as a draw from an urn (March and Shapira, 1987). The decision paradigm is one in which the firm seeks a high return by maximising the degree to which it draws on its own competence, while reducing the threats to that return. Managers choose those investments in which there is the greatest opportunity to reduce the variance - by cutting off the downside risk. Thus the firm tends to select investment projects in which the number of risk dimensions is reduced to a minimum. In other words, a foreign producer acts as though it can only afford one strategic disadvantage, and outsources that competence to a local expert. Since outsourcing primarily involves contracting processes, at which it is already experienced, the single local new risk is even further reduced.

This leads to the question of which sub-environment a foreign producer chooses to enter next. Since the next location must be the “right” environment, in terms of demand for the firm’s product as well as existence of suitable local partners, a foreign producer begins with its closest “neighbour”, and continues to move on to the next closest neighbour in a cascading sequence. This simultaneously minimises business risk and maximises the capacity to impute causality.

In a learning sense, the outcomes are highly interpretable, because most aspects of operation remain constant (March, Sproull and Tamuz, 1991). The tournament process is clearly one which meets this March and Simon (1958) criterion. As they point out: “An organisation is confronted with a problem like that of Archimedes: in order for an organisation to behave adaptively, it needs some stable regulations and procedures that it can employ in carrying out its adaptive practices. Thus, at any given time an organisation’s programs for performing its tasks are part of its structure, but the least stable part. Slightly more stable are the switching rules that determine when it will apply one program, and when another. Still more stable are the procedures it uses for developing, elaborating, instituting, and revising programs.”

Through the particular patterns identified for the building blocks above, the foreign producer ideal type has processes for adding to its repertoire and so achieving the fulcrum for accomplishing long run adaptiveness. The stable core of the organisation structure is protected by a set of decision rules which address the management of risk. An organisation can reduce risk exposure in two ways: by selecting only those new opportunities which most closely resemble its existing set of programs and by adapting existing operations only in one dimension at a time. In each case, the organisation is able to focus attention on (and select management specifically chosen for their strength in) the one dimension which represents a threat or risk because it is not yet a part of the firm’s repertoire. This process of risk management in a sequential adaptive manner is referred to here by the shorthand “one risk at a time”.

In this fashion then, the building blocks of environment and change combine to create a distinctive coherence in the way a foreign producer minimises the business risk involved in entering new geographic markets.

4.5.3 Decoupling local from global

The capacities of the foreign producer form described above concerning economies of scale and risk management do not directly address the central concern of management

theorists such as Ghoshal and Westney (1993), in relation to how it meets a key demand of an international environment, namely, that the MNC needs to resolve the difficulty of simultaneously capturing global economies of scale and being locally responsive in highly complex environments. These issues have been addressed implicitly in the preceding discussion, but here they are made explicit.

In an ideal type foreign producer, with its multiple production locations, activities which are global and common are partitioned out from those which are local and specific, and managed differently and separately. Specifically, the production process, as the element that is common across all locations, is owned by the organisation, and managed by the centre to provide highly reliable performance in all plants and to be improved continuously across the whole operation. The capacity to identify and write contracts around and work with certain kinds of local partners is also owned by the centre. The local component, which extends from cosmetic product characteristics such as the shape or colour of a roof tile, to the brand name, sales and distribution networks and management of the local legal and business environment, is managed by the joint venturer or the acquired former owner. Thus fit with the local environment is achieved at the same time as maintaining the integrity of the global operation. What is local is owned by the local management and what is global is appropriated by the corporation. The responsibility to deal with local issues is local, within the constraint that it cannot fundamentally alter those aspects which are global.

This partitioning simultaneously provides simplification and tractable interaction between the benefits of global operations and local responsiveness. It has resonances with a Japanese management philosophy, cited by Mito (1990), which envisages management as akin to weaving cloth: "A scholar of classical Chinese literature, Kojiro Yoshikawa, once wrote that the first character in the word 'kei-ei' (management) means 'tate ito' (warp thread), and I think this provides a useful insight. In weaving cloth, the warp thread remains stationary, running the full length of the piece of cloth. Only if the warp is kept straight can the weft thread pass smoothly from side to side in creating the fabric. The

warp is strong and continuous but flexible enough to incorporate whatever kind of weft comes along, depending on the circumstances. That, I believe, is the true meaning of management.”

It is as if a foreign producer is weaving a cloth of multiple operations in which those elements which are common across all sites comprise the warp, and specific locations are the weft. The centre focuses on managing the warp (or core production processes and competences) and allowing the weft (or specific locations) to be woven through, but not to disrupt the warp. There is virtually no contamination between the aspects of a foreign producer’s operations which are global and those which are local, and the local managers are empowered, rather than made subservient. All this is only possible when an organisation can select to enter environments in which it has a winning hand. To return to the warp and weft metaphor, it only selects an environment in which the warp of production processes is appropriate and can be applied intact.

This is illustrated in Figure 4.2, where different national markets are represented by the blocks, and the horizontal band represents the global and common elements of a foreign producer’s capacities. Figure 4.2 is an adaptation of Takeuchi and Porter’s (1986) representation of a strategy of targeting diverse segments across countries. They were demonstrating that a physically similar product can be sold everywhere if marketing activities are tailored for each country. That strategy then makes it possible to standardise upstream operations.

Takeuchi and Porter’s (1986) conceptualisation has been adapted in two respects in order to apply it here. First, the vertical axis is extended from a measure of the range of country buyer segment (high to low) to a broader rubric that incorporates process capabilities and the availability of a suitable partner (joint venturer or acquisition target), as well as demand for the product. Second, the model here illustrates that some countries will not be included in a foreign producer’s strategic consideration set because they do not require the capabilities that the firm has to offer. To enter those markets, represented by Country D,

4.6 Application and discussion

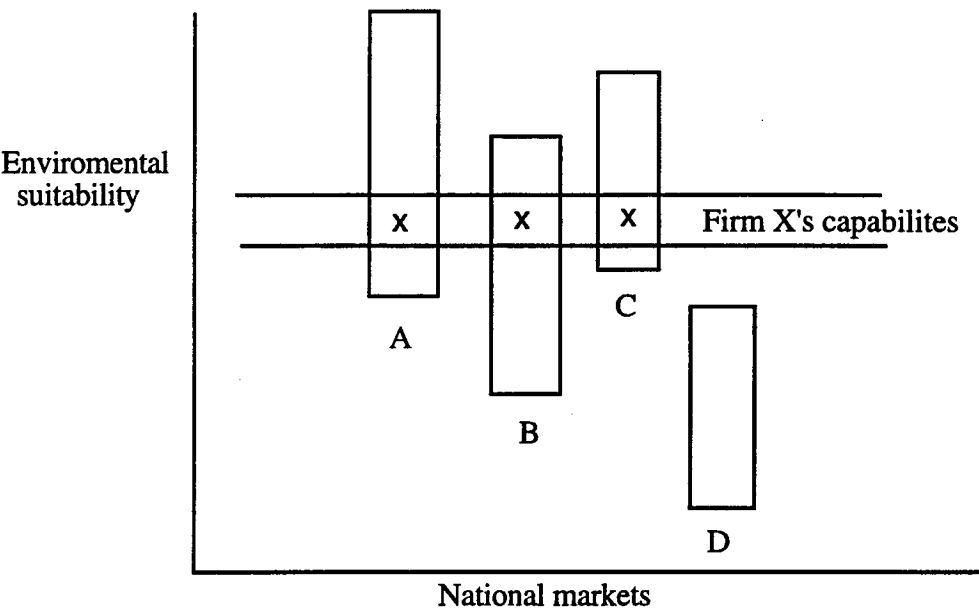
This final section begins by returning to the two illustrative cases introduced at the beginning of the chapter. Their role at that point was to provide the reader with a picture of a way of operating internationally that differs from the descriptions of MNC behaviour that are familiar from the literature. Here, the two firms are briefly revisited to provide an illustration of how the foreign producer ideal type described here might appear in an actual organisation. It also makes apparent that there can be different mechanisms for achieving the same purpose for each of the building blocks.

For Boral, intra-firm competition operates not in terms of profitability, based on the bottom line, which is residual and subject to substantial noise between units, but as benchmarking of technological performance against best practice within the group. The data on best practice is constantly current. Each production unit can be set high but achievable goals (Locke and Latham, 1990), and the constant monitoring of performance provides feedback which allows managers to adjust their own efforts as well as providing firm-wide data. The transparency of performance across plants provides the self-interest and motivation which contributes to the effectiveness of the competitive process. At the same time, the competition is constrained in several ways that make it more effective. Individual plant managers cannot choose to diversify away from Boral's core competencies. The competition is bounded within the product domain of bricks, for example. It occurs around continuously improving the techniques for producing bricks.

Learning is apparent in several respects. Transparency empowers the local management team because they can automatically obtain feedback on their performance, as well as readily identify the locus of improvements. Local managers do not need to be directed by the centre to look for the learning at Plant X. They can observe for themselves where superior performance is occurring, and are motivated to emulate it in order to improve their own performance, since that is also continually visible to all operating units as well as the centre. There is also a formal mechanism for collecting new ideas from acquisitions

provides no opportunity to capitalise on the multi-plant economies of scale that already exist in upstream production, and risks damaging the firm’s overall capabilities.

Figure 4.2: Selection of sub-environments



Adapted from Takeuchi and Porter, 1986, Figure 4.4, p. 139

Another distinctive feature of the “warp” in a foreign producer is that it contains not only stable process system, but also the network that links all the individual units together. On the financial management side, a foreign producer would apply a universal chart of accounts. In terms of production process, the “warp” in Boral’s case tends to be linked around its technical management system, while for Burns Philp, it lies more in arrangements for monitoring by an expert team. Thus the structure exists at a unit level, of the specific plant and its local links, and at the meta-level of the whole firm, as a network. When a foreign producer enters the next location, not only is the plant replicated, but that network is also automatically extended. There is no need to create a new set of working arrangements between the centre and that latest subsidiary, or between it and other plants. There is automatically a fit between the new plant and the rest of the organisation, while the local partner ensures there is simultaneously a fit with the local environment.

in the team that inspects soon after purchase. For instance, Boral found that while the kiln efficiency for bricks was higher in the Australian operations, the surface technology at the US Merry Brick operation was superior. In both countries, plants were adjusted to incorporate those best practices.

Thus this foreign producer simultaneously removes barriers to learning, such as the “not-invented-here” syndrome, and reduces production costs. Further, because learning can take place in parallel at multiple sites, which each have different skills and, in the Von Hippel (1988) sense, different perceptions, the probability that innovations will occur across the whole range of production activities is increased. Additionally, there are some parallels with Honda’s practice of “one-theme-per-person (group)” in R&D (Mito, 1990, p. 68). The scale provided by multiple sites also increases the chance that there will be something within the firm to learn. The resulting continuous incremental nature of the change in process capabilities constitutes an evolving dynamic that builds on and enlarges their strategic options.

Finally, Boral does not treat the environment as an independent exogenous variable. It chooses to invest only in environments that it understands, where there are independent firms to acquire. It therefore enters an environment where it can leave both the local content essentially untouched and the local representative to deal with the local and country specific issues, while the centre concentrates on upgrading the process skills and platforms. Boral buys intact firms where the reason for sale is often that none of the founder's family wish to continue in the business, so a new owner is needed. In this way, Boral only chooses to enter geographic markets which demand core products such as bricks, and in which there exists an appropriate acquisition target. Essentially it is seeking an opportunity to keep an ongoing business, but add value from the centre. This is easiest where the owner wants to sell but the other managers wish to stay, and is particularly true of family businesses established after the second world war. The cosmetic product characteristics and local distribution and sales networks and marketing approach are treated as local content and left intact.

Burns Philp makes the same separation between financial and operational performance that Boral does. Although it partitions performance in similar ways, the style of managing the aspects that are global and common differs. Burns Philp relies more on a regular inspection process, which means more visibility of those from head office than at Boral. This distinction is primarily a function of the difference in production mechanisms. The yeast production process relies for its efficiency not only on optimal performance of each stage of the process, but also on the interdependencies between processes. It is also more difficult to obtain data that represents meaningful indicators of product quality at any particular stage of the process. Consequently, the headquarters team plays a crucial role in fine tuning the total system and constituent elements, or returning them to optimal condition. The practice of transferring plant managers between the original domestic plants also reflects this need to monitor the overall plant operation. In Boral however, it is the middle managers, who have responsibility for more specialised discrete aspects of the operation process, who are transferred, and by implication, in whom the critical competences exist. Competition is similarly constrained within the medium scale plant wet yeast production process. The data base provided by the detailed operating manuals, which are highly proprietary and capture the knowledge that resides in individual plant managers and the expert inspection teams, allows managers to get feedback so that they can act.

The tournament and inspection process is also the mechanism by which Burns Philp learns as an organisation. In this case, learning consists of making multiple small improvements and transmitting them to all other locations. The scale provided by multiple plants is also a factor in their learning which can occur at multiple plants; in effect what Honda term simultaneous competition among different approaches (Mito, 1990). The results, or learning, from this tournament are now captured and transmitted through the inspection teams, while in the earlier domestic operations, they were captured by rotating the plant managers from state to state. Many of the incremental gains in production technology innovation come from adopting technologies used in other industries.

At the same time, the overall configuration of a plant contributes to effective production. The construction of new plants is a critical part of embedding the learning. Constructing the next new plant in turn provides an opportunity to incorporate all the latest improvements, recalibrated to work optimally together. The learning from doing that can then be installed in the old plants. Undoubtedly, the nature of the production process which entails a flow of material through a series of processes contributes to the way Burns Philp can learn and apply the learning. The technology is not highly embedded in the sense that the different systems within the yeast plant are not tightly coupled between processes. Elements can be removed and replaced relatively easily. At the same time however, the flows when the plant is operating are critical to performance. There are parallels with Chaparral Steel (Leonard-Barton, 1992), where a competitor would not learn enough by inspecting a plant to be able to imitate their competitive advantage. Even hiring a plant manager would not allow replication of the plant.

Burns Philp also selects its environments deliberately. In entering a new market, it considers only locations where bakers demand a high quality yeast. For instance, the bakery supplied by the first Chinese operation had high production runs that demand reliable performance from the yeast to ensure that all loaves rise the appropriate amount during the handling process so that they will all cook “to a turn” as they pass through the oven. If the yeast does not perform reliably, the first part of the batch may not cook enough and the last part may be burned to a cinder. It is important to note here, that as Burns Philp expands into markets which are denser than those in Australia, it does not build larger scale facilities to cope with the higher volume requirements. It simply adds additional medium scale plants to the site. And, of course, every time it does so, it learns more about optimal plant operations.

4.7 Conclusion

This chapter has set out to construct a theory of an ideal type of foreign producer as a competitive form of multinational organisation. As described in Chapter 2, the foreign

producer as a potentially competitive organisation form for international competition has been overlooked. Foreign producers were not of interest to Porter (1990), whose primary agenda in *The Competitive Advantage of Nations* revolved around exporting as a national goal, nor to Bartlett and Ghoshal (1989), inter alia, who focused on solving the problems faced by MNCs managing a mixture of exporting and foreign production across diverse product categories. For Australia however, foreign producers are highly salient. They dominate the population of publicly listed manufacturing firms with annual sales in excess of \$1 billion (1988 figures). The taxonomic analysis presented in Chapter 3 shows that foreign producers are also represented in most countries and industries among the set of the world's largest MNCs. Since contingency theory suggests each foreign market servicing strategy requires its own organisational arrangements, identifying an effective configuration for foreign producers moves towards theoretical completeness.

An ideal type of MNC is proposed, to be contrasted with a global exporter. The overall profile for the foreign producer ideal type is intra-firm constrained competition, multiple plants, multiple locations for innovation, continuous change, and selecting into friendly rather than potentially hostile environments. For this ideal type, the existence of multiple plants in multiple locations does not destroy economies of scale. Rather it provides the opportunity for multi-plant economies of scale in terms of both efficiency and innovation in production processes. Nor does being locally responsive damage their capacity to capture global learning or operate global strategies, primarily because the product and its characteristics are uncoupled from the production process used to manufacture it. The global component for these firms is the process technology, and not, as commonly assumed, the product characteristics. The introduction, maintenance and development of process are coordinated and regulated on a global basis, and various mechanisms ensure the learning that occurs in one location is transferred throughout the network of plants. It then follows that the economies of scale are across the network rather than at the plant level. Individual plant or country managers do not have the choice to depart from existing best internal practice for the process technology in significant ways, unless they are

improving performance. They also generally have the opportunity and some incentive to contribute to that development process.

As such, the mechanisms by which foreign producer operations might confer competitive advantage in international markets are quite different from those that allow a global exporter form to be competitive. There is therefore a risk if those models of a global exporter and other typologies are uncritically extended to firms operating in “foreign producer” environments. For instance, the human resource management issues differ for each type. Similarly, the link between strategy and operations management is dissimilar in important respects, and the use to which IT is put, and the nature of the roles it is required to fulfil are quite different. Without a clear appreciation of the different operating configurations of a foreign producer and global form, managers risk taking decisions on the basis of inappropriate assumptions.

The resolution relies on the contingency theory principle that firms pursuing different strategies require different organisational arrangements, including structures and managerial skills, to support them. Specifically, the chapter proposes that the lack of mixed mode MNCs explains why global managers were not identified by the firms studied as necessary for their international operations. The “global manager” solution, which dominates the current literature on international SHRM, can be seen as a solution to the problems that confront a mixed mode MNC. None of the sample of firms studied take that form. They instead compete either as global exporters or foreign producers. In this they are representative of the locally domiciled manufacturing sector.

The chapter begins with a brief synopsis of the two streams of literature in which the study is grounded - international HRM, and international competitiveness of Australian firms, and then outlines the methodology used for the research. The findings are reported in the subsequent section, followed by a discussion that reconciles the counter-intuitive findings with the existing literature.

5.1.1 Internationalisation literature

The current international HRM field emphasises “global managers” as a crucial resource for all firms wanting to be globally competitive in the 1990s (Hambrick, Korn, Fredrickson and Ferry, 1989; Adler, 1992; Bartlett and Ghoshal, 1992). Such individuals have a strong interest in and tolerance for other cultures as well as a sound understanding of how a particular decision might affect a company's many competitors and markets around the world. They can “think globally and act locally”. Consequently, many multinational firms identify building a globally oriented staff as a top priority (Ely and McCormick, 1994). However, most firms have only recently embarked on programs designed to foster this (Odenwald, 1993) and face continuing problems (Weeks, 1992; Ely and McCormack, 1994).

Although the current international HRM literature emphasises “global managers”, the field is broadly underpinned by a contingency approach, arguing that skills should be tailored

Chapter 5

The myth of the global renaissance manager?

5.1 Introduction

This chapter is an empirical and theoretical piece that examines the international management skills of Australian firms competing successfully overseas. The international human resources management (HRM) literature focuses on the need for “global managers” in increasingly global and dynamic competitive environments (Adler and Bartholomew, 1992; Bartlett and Ghoshal, 1992). While identifying and developing these human resources is reported to be a central issue for international firms, field research into large foreign producers and small global exporters indicated that recruiting or developing “global managers” was not salient for a sample of Australian firms operating successfully in international markets.

Thus the chapter addresses an additional dimension of the gap, identified in Chapter 1, between the existing literature on internationalisation and the behaviour of Australian firms, relating to international human resources management issues. This particular data-literature gap was revealed by research commissioned⁸² to identify the skills Australian firms consider critical to pursuing their international strategies as a basis for determining appropriate training and other policy responses. The gap is resolved by integrating the stages-based contingency theory on international HRM with the categorisation of firm types used to classify MNCs in the thesis. This provides a resolution that accommodates both the empirical results of the study and the current emphasis on global managers as a critical resource for firms operating internationally.

⁸² The research was commissioned by the Industry Task Force on Leadership and Management Skills, chaired by David Karpin.

to a firm's particular circumstances (Tichy, Fombrun and Devanna, 1982; Miles and Snow, 1984). In the international HRM field, this contingent view is embedded in the Uppsala stages model of internationalisation, which has been described earlier in Chapter 2. Leading researchers in this area argue that each stage a firm passes through requires different structural responses, control mechanisms and HRM policies (e.g. Dowling and Schuler, 1990; Adler, 1992). This is viewed as an evolutionary process.⁸³ Dowling and Schuler's (1990) schema, which is representative, is summarised below to identify the skills that each stage requires.

Firms in the first stage have a domestic focus. Initial exports tend to be opportunistic (Williamson, 1990), typically handled by an agent or distributor in the foreign market. As export sales increase, an export manager may be appointed to control sales offshore and identify new markets. When exporting becomes a strategic activity, a major commitment is made in the form of setting up an export department at the same level as the domestic sales department. The export manager tends to travel extensively. This stage has few special HRM or individual skill implications.

As it continues to grow, and exhausts opportunities for growth in the local market, the firm becomes a strategic exporter, producing specifically to service overseas, as well as domestic, markets. In this second stage, sales subsidiaries or branch offices in the foreign market replace the agents or distributors. Most firms choose to staff the subsidiary with host country nationals, reflecting a judgment that country-specific factors are important. The corporate HR issues for firms that choose to send parent country nationals (PCNs) are limited to monitoring the selection and compensation of staff for the sales subsidiary and export department.

Moving to foreign production constitutes the third stage of internationalisation and often involves creating a separate international division with responsibility for all international

⁸³ It is often acknowledged that firms progress at different rates through these stages, and that not all firms progress sequentially. For instance, some leapfrog the early stages by entering via acquisitions. Nevertheless, the movement towards the end point, which in terms of the categories of MNCs used in the thesis is the mixed mode MNC, is taken for granted.

activities. Historically, most firms in this phase have emphasised control of the foreign subsidiaries, and staffed the new facilities with PCNs. Selecting, compensating and managing expatriates, and their conditions of service whilst overseas are the main HR issues (Pucik, 1985). Training for expatriates and their families is culturally specific, focused on a single country. However, in some industries, national responsiveness is considered the key strategic demand of this phase (Bartlett and Ghoshal, 1989), and each subsidiary is treated as a distinct national entity, with some decision making autonomy. Local nationals usually manage the subsidiaries, but are rarely promoted to head office positions. Any corporate coordination of human resources policies is loose and informal. The subsidiary's manager and staff make the adaptations not only to local product market conditions, but also to local sociocultural circumstances (Evans, 1986). Many of the US manufacturing firms that moved to this third stage of foreign production are observed to have done so in a haphazard fashion (Dowling and Schuler, 1990). The decisions were often defensive reactions to the possibility of losing markets that had been acquired almost by accident (Stopford and Wells, 1972).

In the fourth stage, the organisation moves towards product standardisation and diversification. The size and diversity of operations create communication and efficiency problems. Subsidiaries face pressure to be responsive to local conditions because of factors such as customer needs, differences in market structures, distribution channels, pressure from local governments and local culture. At the same time, the corporation's headquarters faces pressure to centralise and integrate the separate national operations. Inevitably, tensions arise around these conflicting needs for the subsidiary to be responsive to local conditions, and the pressures from headquarters for global integration.

Importantly this phase, in which top managers recognise that strategic planning and major policy decisions need to be made in the central headquarters to ensure that a worldwide perspective on the interests of the organisation can be maintained, is considered to be the coming of age for a multinational. The fifth and final stage is essentially an acceleration of the trend towards taking a global perspective, begun in the fourth phase. In response to a

highly complex environment, in which a range of forces such as global customers and competitors, world-scale factories and universal products provide pressure for global integration, and local responsiveness is still required by local markets and governments, many firms are seeking to become transnationals (Bartlett and Ghoshal, 1989).

It is this transnational firm, found in the last of Dowling and Schuler's (1990) stages, that calls for "global managers" and is considered to be the most highly evolved form for a multinational corporation. Much of the international HRM literature, with its stages model basis, infers that all firms that wish to compete effectively will need to be transnationals, and thus will need global managers, and should be working towards developing a cadre of such staff. The best way to achieve this remains unclear.

Building on this background, the research reported here sets out to identify how key Australian firms were solving the "problem" of operating internationally, by examining what a sample of successful international players saw as the critical elements for pursuing their international strategies. The objective was to use the findings as a basis for developing priorities for policy about the development of skills for international operations. Thus, the first working hypothesis for the research, deriving from this stream of literature was that operating internationally requires a firm to have specific international HRM skills.

5.1.2 Research on Australian firms

The research also drew on a second, emerging stream of research addressing the narrower question of how Australian firms compete and win internationally. This reflects the national context of the study. In keeping with the role of the study as part of a wider research agenda for a government task force, the aim was to maximise the relevance of findings for Australian firms and managers.

That research (AMC et al, 1990; Yetton, Davis and Swan, 1992; McKinsey, 1993) suggests that Australian firms compete and win differently in some crucial respects from

the traditional models of internationalisation, derived exclusively from US and European experience. The existence of such differences suggests that locally domiciled firms have distinctive characteristics as a function of their home-base imprinting (Kogut, 1993).

Those findings suggest that the future for locally-domiciled manufacturing firms lies primarily in one of two dominant organisation forms. The first is the foreign producer, which is the form adopted by Australia's large and successful manufacturing firms. As articulated in preceding chapters, they compete internationally by operating small to medium scale production facilities across multiple locations and selling locally, rather than exporting. The other form is global exporters which, for the most part, exist only in emergent form in Australia. These are small, high growth firms, typically in high technology production markets, for whom exports are a major source of sales from their earliest years (McKinsey, 1993).

Significantly, as Figure 1.1 shows, none of Australia's large manufacturing firms are mixed mode MNCs - firms which have both a high proportion of exports from home base and whose foreign production accounts for a high percentage of their total sales. Research into small to medium sized manufacturers⁸⁴ also shows that very few of the locally domiciled small firms with international activity operate as mixed mode MNCs. Related analysis of Porter's (1990) view about the competitive advantage of nations also indicates that, just as the population of Australian-domiciled successful international firms is distinctive, so too are the environmental and other factors that determine the competitive capabilities of local firms.⁸⁵ Accordingly, the competitive environment faced by Australian firms is not the same as that in North America or Europe in some key respects.

This research suggests then that successful Australian firms in the global arena have some distinctive elements to their strategies which result directly from the domestic competitive environment, that their configuration and growth paths are not consistent with the popular

⁸⁴ Those with export sales of between \$2 and \$50 million in 1992. Most of these firms had under \$100 million in annual sales, with fewer than 500 employees.

⁸⁵ See Chapter 6.

models of internationalisation, and that Porter's (1990) model for competitive firms is not appropriate for Australia.

This second body of literature generated the second working hypothesis for the field research, that Australian firms would have developed unique solutions to the question of skills for international operations, because of the distinctive nature of their home base environment. Understanding the nature of the international operations of the firms that predominate in the manufacturing and service sectors in Australia was considered crucial to evaluating their skill needs, given the contingency approach adopted in both the international HRM literature and this thesis.

5.2 Methodology

A qualitative research methodology was chosen in light of the incomplete understanding that currently exists (Eisenhardt, 1989; Yin, 1994) in relation to both the development and management of global managers, and the successful international operations of Australian firms. Over forty hours of extensive in-depth unstructured interviews were conducted with more than twenty senior managers in those seventeen companies. The aim was to elicit their views about which issues were crucial to their firms, rather than to gather information about issues already determined to be important. Transcripts of these meetings formed the basis for detailed analysis. Specifically, the CEOs and other senior managers were asked about how they competed and won internationally, what skills they thought mattered most, and how easy they were to come by. Publicly available documentation (e.g. Annual Reports, business press commentary, etc) on the companies studied was also reviewed. Where available, documents covering policies and procedures for the selection, training, evaluation and rewards for managers responsible for overseas activities were also studied.

The selection of firms to be studied reflected the second working hypothesis - that Australian-domiciled firms, which predominantly take one of two forms (foreign producer or global exporters) have found distinctive solutions to the problems of

operating internationally. Three large foreign producer manufacturing firms (from Yetton, Davis and Swan, 1992), were selected for analysis, along with 10 emerging exporters (from McKinsey (1993)), five from each of the two main cities, Sydney and Melbourne, and three large service firms. The service firms competed in a fashion similar to the foreign producers. One medium-sized foreign producer manufacturing firm was also studied to explore whether size was a critical factor - it was not.

Two characteristics of this methodology - representativeness of the sample, and the fact that it is a success sample, were not an issue in the original design. It was assumed that the firms studied would have a set of skills for international operations, and define how to acquire and develop them, and that this would provide a guide to developing training policies. But, as the following report of findings shows, the actual results are different from those originally anticipated. Consequently, the questions of whether the firms studied are representative of other firms, and the characteristics of the marginally successful and unsuccessful firm become relevant. These issues are addressed in the discussion section.

5.3 Findings

The findings from this research were surprising against the background of existing literature. Specifically, identifying and developing managers who can think globally and act locally was not raised as an issue. There was a high degree of consistency across interviews. "Global managers" were not mentioned as a key resource, and other international HRM skills were rarely spoken about. Further, across the sample of 17 firms, executives talked consistently (and unprompted) about the same set of alternate, more business-focused issues as being important. The findings are reported in summary form only, in order to protect the confidentiality of the firms studied. Points made by the majority of executives interviewed and representative quotes are reported.

The findings, based on detailed analysis of the meeting transcripts, are summarised in Table 5.1, below, which lists the main issues identified by interviewees, and reports the proportion of the 17 firms studied for which these points were raised unprompted.

The skills identified by interviewees can be grouped into four categories, identified in Table 5.1, which reports the elements identified as key for operating internationally. The first deals with the set of skills and competences that are simply taken as given, if a firm is to compete offshore. The second relates to the decision to go international. The third concerns entering foreign markets, and the fourth is about operating on a continuing basis in those foreign markets. These categories emerged from analysis of the interview transcripts rather than being theoretically derived ex ante.

Table 5.1: Skills for international operations: summary of findings

Category	Issue Raised	% of firms (n = 17)
Taken as given	Subjectively benchmarked as top 20% in Australia	94
Decision to go international	Had to go offshore	94
Entering foreign markets	Need to understand market	100
	Find local expert - partner/friend/guide	94
	Persistent	100
	Sophisticated buyers	100
Continuing operations	Run it with a local	100
	Constant communication	100

5.3.1 Factors taken as given

It is taken as given by all firms that they offer high quality products/services at the right price, understand what their customers want, and are successful in the Australian market:

“People buy any product because they see the perception of value. That’s the reason why anybody buys anything.”

5.3.2 Decision to go international

The second issue on which there was consensus was that the firms had to go to overseas markets because they had exhausted the opportunities in Australia. It was not a choice, or a matter of will, but a necessity for continued growth or even survival.

“The export thing came along not as a conscious decision to export, but as an imperative. When I discovered that there wasn’t enough business in Australia for xxx to be successful, export became a necessity. And it very soon became obvious it wasn’t difficult and it enables a high tech company in a small country like Australia to actually become quite large.”

5.3.3 Entering foreign markets

The third main set of points related to entering foreign markets. This involves several issues. First, all agreed that it is vital to understand the market being entered.

“Well, the first step was to define the market, the approach to the market and make sales before recruiting anybody.”

“We now buy formal market research whereas before, if someone had come in and said, I’ll tell you about the United States market, all you have to do is pay me \$5,000, I wouldn’t have spent it. I would rather ring up some people I knew over there. But now it’s different. Again, as the company grows you have to do things differently.”

“Market research is critical, absolutely critical.”

Almost all identified finding someone they trust to guide them around a new foreign market as a crucial issue:

“We have found partnerships by and large are difficult, but they have worked. We have used them when we are entering a market that we don’t know much about. When you get into European markets, it is very sophisticated. In fact, that is the problem - there is so much unsaid, unwritten, but only implied once you get there. So that is why the partnerships we think have been a good avenue for us. But we always must have a route to control at the end of the day.”

“Someone approached us for some work, and we ended up with the one representative/agent to start with and that was a set back. We spent the first 2 to 3 years trying to get rid of him, and we unwisely made an agency arrangement, which we shouldn’t have. We are much more careful now about that sort of thing.”

While most firms thought their ability to identify and work with partners had improved with experience, they did not consider that the critical agendas and issues that arose in one location could be generalised, either to other locations in which their firm might subsequently operate, or to other firms. Rather they seemed to have learnt to move carefully.

There was also agreement that persistence often mattered:

“Are you prepared to stay in there for 4 or 5 years in that marketplace and not score, and still keep knocking on that door?”

Another frequently made point is that the firms face many more market opportunities than they can fulfil. The dilemma is choice, rather than scarcity.

“Our biggest problem at the moment is selecting joint venturers. We would have ten companies overseas at the moment who want to do some sort of deal or other.”

Finally, all those interviewed pointed out that, in most instances, their customers are sophisticated and informed purchasers who are willing to invest in search processes. This may partly account for the fact that even when asked specific questions about cross-

cultural and other skills, all said that those issues were not problems.⁸⁶ Some even directly commented that they were peripheral.

"I don't think it is a particularly Asian thing. Turn it around. People roar into Australia. You know, they come in from France, England or America and they want to see you, and you see them, and you think "who on earth was he?", and you never see them again. But if they come back and come back, you think "this guy must be serious". I think we react in almost the same way."

"A lot of the myths that are out there about the fact that it's more competitive, that you've got to be cheaper in price, the cost of freight will kill you, you have to understand the culture of the people, it's all rubbish. At the end of the day, if your product will work as well as or better than the other product, and will save them or make them more money than any other product, regardless of your religion, what country you come from, your colour, or anything else, they deal. That's the bottom line. It helps you to understand that you shouldn't point your foot in Thailand, and so on. But I mean, they're pretty basic things, and you don't do anything to offend people in that way. But if you've got what they want, and they want to do business, then it's fine by them."

There is not an intention here to suggest that understanding a foreign market and its characteristics, particularly its cultural characteristics, is not important. Indeed, all those interviewed said it was, but did not invest in internalising that understanding. Instead, they outsourced this to a third party. To an extent, this mimics best practice within their domestic market, as the following comment by the principal of a Melbourne domiciled firm illustrates.

"I don't think we could open our doors in Queensland without having had a presence up there and knowing a little bit about Queensland and be successful. Our

⁸⁶ As self-report data, this is subject to a validity threat, and would need to be validated by information from customers in a study that focused specifically on that issue. Continued successful performance in foreign markets of firms in the sample provides partial support.

success there is because we acquired yyy, which was a household name in this field in that state. What we did was to purchase the networks, we purchased an order book and we purchased people who knew their way around, and we have been successful.”

5.3.4 Continuing operations

The fourth and final category of findings related to managing the international operations once they are in place. Foreign subsidiaries are routinely staffed on a permanent basis by host country nationals, but with a slightly different flavour for the two main types of firms. The foreign producers have technical experts from the home base oversee the adjustment of acquired plants or commissioning of new plants. Continued operation, however, is in the hands of subsequently appointed local managers.

“Another recipe for our success, from our point of view, is that we have been prepared to leave a local person in charge of every business.”

Performance data, either financial or technical, are continuously monitored; surfacing problems at early stages. Subsidiaries are expected to explain/rectify shortfalls, and were given technical assistance if a production process problem turns out to be difficult or unusual. This new knowledge is often transferred to all plants through the central technical teams.

“We just put a new piece of equipment into one of our plants in England, and it has been terrific. So there is a team of people from all over the rest of the world going across to look at it, and if we think it is good, then we’ll put that piece of equipment elsewhere.”

For their part, the emerging exporters staff sales and service subsidiaries with host country nationals. A crucial first step on market entry is identifying those individuals, with the CEO, or a key individual putting in a substantial effort.

“If you want to sell anywhere, the best guy to do it is a local. The problem is to make that local want to work for you. The hardest thing was to find the right first few people, with the right attitude, aptitudes and skills to face an unknown market as a subsidiary of an unknown company.”

All firms in the sample maintain close communication with their local managers of either sales and service subsidiaries (for emerging exporters) and of production facilities (for foreign producers).

“We have a very short line from them (overseas investments) to home - they don't go through local filters or bean counters or something. All the country chief executives are on the Board, so that gives them a feeling of belonging. And we get them together about 5 or 6 times a year at the Board. Four of the meetings are usually here and we will have two somewhere else. We get monthly reports and they are vitally important - they are consolidated and analysed etc, but if you are not there face to face, then you are on the phone, and you are getting a feel of what is going on.”

In the emerging exporters, overseas operations impose a heavy burden on the owner/CEO, who is constantly travelling:

“I travelled overseas twelve or thirteen times last year.”

The strains imposed by continuing rapid growth were also a problem. Emerging exporters in particular face constraints from the lack of financial resources to go to the next stage of growth, especially given the general reluctance of Australian banks to lend against cash flow rather than assets. They also have limited succession capacity.

We believe we need to bring someone else in to train. The problem is to find someone who also has that commitment to the company

Finally, technical skills are crucial to continued success of most of the firms, but are not generally in short supply.

As the preceding summary of the main themes shows, these firms do not place finding and managing “global managers” high on the list of key factors required for international operations. There is a high level of consistency across all interviewees about what does matter - having a good product/price/service, deep mastery of your own business and knowledge of your industry, knowing the market, meeting customer needs, etc. Cultural and language skills are considered secondary. The firms did all recognise that various national, and often regional, markets operate differently. However, instead of developing the local understanding themselves, their solution is to engage a “local” to manage those elements of the business. They did not talk about finding or developing managers who can think globally and act locally, and when specifically asked, all but one replied that such skills did not fundamentally matter. It is worth recalling here that an unstructured, open-ended interview technique was used, so the flow and content of the interviews reflected the priorities and concerns of the managers.

The strong assumption that Australia’s large organisations, mainly foreign producers, had some skills, such as cultural awareness, that were critical for their international success was implicit in designing this research study and in asking the successful firms what skills they needed for international operations. Against that expectation the findings reported here were surprising.

5.4 Discussion

The research findings are inconsistent with the current emphasis in the literature and the popular business press on “global managers”. They constitute yet another dimension of the gap between data and theory that is the theme of the thesis. In order to address that gap, the findings are integrated within a framework that takes account of both the literature and the portfolio of Australian international firms. The integration is achieved by suggesting that the mainstream literature does not apply to Australian-domiciled firms, because the two types of Australian firms which compete internationally are different from the type of firm that is the focus of that literature. Accordingly, although the

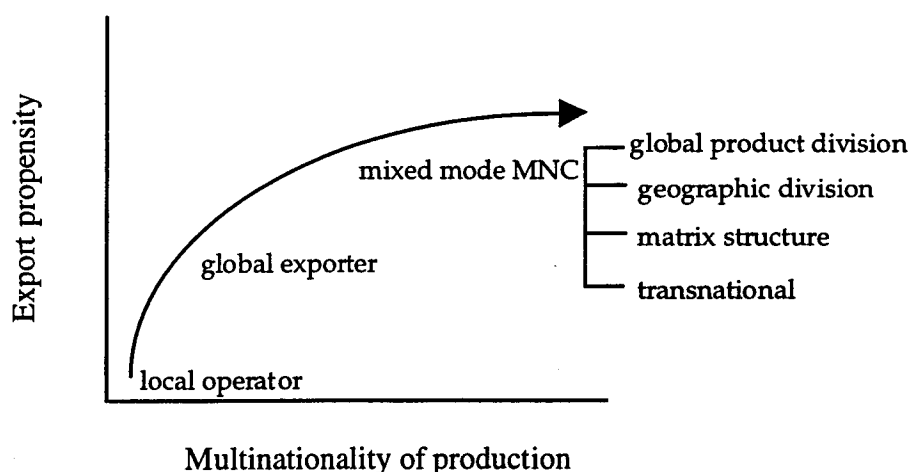
dominant view applies to and is useful for many multinationals, it is less relevant for the current stock of Australian firms competing overseas.

Specifically, both the reported findings and the existing literature on skills for international operations are reconciled by relating the international HRM literature to the MNC strategies and forms identified in the classification schema used for the thesis (Figure 2.2). The apparent contradiction between the findings reported here and the existing literature is resolved by relating the different stages of the SHRM contingency models to the firm types in the schema. This makes clear that the dominant view of the need for “global managers” applies to one category of international firms (mixed mode MNCs), but does not apply to the Australian firms because they fall into different categories (global exporters and foreign producers).

5.4.1 Correspondence between HRM stages model and firm categories

The starting point for explaining these somewhat counter-intuitive findings is to return to the literature on international HRM, particularly its contingency perspective that links the stage of an international firm’s development to skill needs. The representative SHRM stages approach summarised earlier in the chapter (Dowling and Schuler, 1990) largely mirrors the Uppsala model of stages that an international firm passes through as it grows over time. Chapter 2 illustrated this as a path from local operator through global exporter to mixed mode MNC (Figure 2.5). Here, in Figure 5.1, the path is shown as a curved trajectory, superimposed on the original schema for arraying firms (Figure 2.1) rather than the stylised matrix used in Figure 2.5. Accordingly, the solutions that have been developed in the international SHRM literature can be aligned with the firm types used to categorise MNCs in this thesis, as identified in Figure 5.1. This makes apparent that much of the more recent literature addresses problems faced by the operating complexity of mixed mode MNCs. Recommendations have ranged from the global product divisional structure, to geographic divisions, the matrix structure, and most recently, to the transnational form.

Figure 5.1: Stages of internationalisation and firm type



Conceptualising the internationalisation process in this way makes it clear that the fourth and fifth of the stages identified in Dowling and Schuler's (1990) international SHRM model constitutes a variation within the third and final stage of the Uppsala internationalisation model. That fourth stage does not entail a change in foreign market servicing strategy, but involves moves towards product standardisation and diversification, and the organisation's efforts to deal with the complexity of the managerial task now facing it.

The figure illustrates how firms have experimented with several structural solutions to the "problem" of being a mixed mode MNC. This problem revolves primarily around the complexity generated by multiple markets, cultural environments, and governmental regimes, often for multiple products. The international business literature takes this inherent complexity, which makes competing internationally difficult, as given (Ghoshal and Westney, 1993).

5.4.2 Complexity faced by mixed mode MNCs

It is suggested here that the problem created by this complexity centres around two fundamental issues: control and degree of centralisation. Centralisation is typically associated with high efficiency and low cost, but at the expense of flexibility and responsiveness. Conversely, decentralisation allows the organisation to be responsive,

but at a high cost. Whereas once these were regarded as tradeoffs, many now consider them to be goals which firms must achieve simultaneously (e.g. Bartlett and Ghoshal, 1989; Hamel and Prahalad, 1989). The extent to which local managers are required to conform to centrally determined practices in turn influences the degree and nature of control that would be exerted by the headquarters over the subsidiary unit. Over time MNCs have grappled with different aspects of this dilemma, by adopting different structural responses which variously provide a solution to either or both aspects. Each has carried different international HRM implications.

The global product and geographic divisional structures can be interpreted as attempts to reduce complexity: a product-based global structure emphasises centrally managing products on a global basis, while an area-based structure, emphasises responsiveness to local conditions. In both cases, corporate management of human resources across the organisation is strategically important. Managerial expertise is needed to coordinate activities and form strategies for world-wide markets, and to oversee contracts between the parent and its foreign affiliates. The need to develop cross-cultural sensitivity as a prerequisite for devising effective management practices for different subsidiaries often becomes apparent (Dowling and Schuler, 1990, p.4).

By contrast, the matrix or mixed structure, with authority shared jointly by the product and geographic divisions makes conflicts of interest explicit, and ensures that priority issues are not neglected by allocating top management champions. Some suggest that this structure was an intuitive response for firms pursuing multiple business dimensions simultaneously (Galbraith and Kazanjian, 1986). The popularity of this matrix structure has declined since the seventies when it was first developed, largely because firms have found it to be an expensive method of organisation.

The currently favoured solution to the problem of the diversified MNC is the transnational (Bartlett and Ghoshal, 1989). The goal of these organisations is “the ability to manage across national boundaries, retaining local flexibility while achieving global integration”.

Instead of trying to solve the centralisation/decentralisation dilemma structurally, these firms can be described as internalising the solution in their managers, by focussing on developing “truly global” executive managers. The assumption is that the skills of the managers will solve the decentralisation/centralisation and control dilemmas facing those firms (Bartlett and Ghoshal, 1990, 1992). Consequently, many mixed mode MNCs currently identify building a globally oriented staff as a top priority. However, this latest resolution to the dilemma of being an MNC remains more a vision and a hope than a reality (Weeks, 1992; Odenwald, 1993; Ely and McCormick, 1994).

Figure 5.1 provides a reminder of the fundamentally contingent context of the prevailing recommendation for “global managers”. They are put forward as the current solution for mixed mode MNCs, firms with high levels of both exports and foreign production. This solution internalises in individual managers the solving of dilemmas that various structural responses have failed to resolve. In other words, it is only these firms that need “global managers”, and the attendant development of an executive cadre with the requisite skills. The corollary, as discussed below, is that global exporters and foreign producers do not require “global managers”.

5.4.3 Categories of Australian firms

When the Australian-domiciled firms that are competing internationally are considered with this perspective in mind, the lack of mixed mode MNCs among that group provides an explanation for the lack of reference to the need for “global managers” by those interviewed in the study. Earlier research, illustrated in Figure 1.1, shows that such firms are missing from the portfolio of large Australian manufacturing firms (AMC et al, 1990). Nor do they occur in large numbers among the smaller manufacturing firms that export from Australia (McKinsey, 1993).

Thus the distinctive character of the national portfolio of successful firms, with only two dominant forms of international competition, is a significant factor. One of the two forms is foreign producer firms, which Chapter 1 identifies as predominant among the

population of large manufacturing firms. These firms compete internationally by operating small to medium scale production facilities across multiple locations and selling locally rather than exporting. The other form is small global exporters,⁸⁷ mostly high growth firms, in high technology markets, for whom exports are a major source of sales from earliest years. There appear to be few if any mixed mode MNCs.

As argued in Chapter 4, both these sets of firms are able to partition the two issues of local responsiveness and global integration, and thus resolve the tension between the two with solutions embedded in organisational processes rather than in individuals. Consequently they do not face the systemic conflict that the literature on mixed mode MNCs grapples with, and therefore do not need “global managers” with the skills and the organisational capabilities to continually mediate those tensions.

It is suggested here that, instead, both sets of firms partition issues with some to be managed globally and some to be managed locally. In effect, the firms studied act as though there are two sets of skills for internationalisation. The first are business and industry skills, related to product, process and management, which form the basis of a firm’s core competences and competitive advantage. The second are those skills relating to country-specific resources and knowledge, which allow a firm to leverage its competitive advantage in foreign markets. These include market characteristics (e.g. level of economic sophistication), government, banking and financing sources, and workforce characteristics and conditions. Responsibility for these two sets of skills is partitioned. The core business skills are managed centrally for the entire scope of the firm’s operations, while the country-specific skills are acquired in each national marketplace. Whether this takes the form of agents, joint ventures or subsidiaries varies, depending on whether the firm is an emergent manufacturing exporter, or a foreign producer manufacturer or service firm, as well as on industry characteristics. In effect, the core business skills are managed for “world-wide operations” in-house, and the country-specific ones are outsourced locally.

⁸⁷ Annual exports between \$2 and \$50 million.

This plays out in different ways for emerging exporters and foreign producers. The former handle production and R&D centrally, in Australia. Sales and service activities are the primary responsibility of local managers in local markets. In other words, production and product are managed globally, and sales and service are managed locally. This is consistent with the conventional international HRM literature. How foreign producers manage these issues is illustrated by the two mini-cases that appear in Chapter 4. Being locally responsive does not damage their capacity to capture global learning or operate global strategies. Chapter 4 suggests that this is because the product and its characteristics are uncoupled from the production process. The global component for these firms is the process technology, and not, as commonly assumed, product characteristics. It is production processes that are managed globally across multiple plant locations. Other issues, including product characteristic variations that do not prejudice the global processes, are allowed to be managed locally. In this fashion, the foreign producers can be simultaneously globally integrated and locally responsive. The existing international HRM literature does not directly address the needs of such firms.

In summary then, it is proposed that the lack of mixed mode MNCs in the Australian portfolio of manufacturing and service firms explains why none of the firms studied raised the issues that predominate in the management literature on skills for international operations originating from the US and Europe.

Given the findings, an issue arises about the representativeness of the sample of firms studied here. In terms of the emerging exporters, ten firms were selected from the forty originally in McKinsey's (1993) study of small to medium sized manufacturing exporters who agreed to be named in that report, with the constraint that firms were drawn equally from the two largest cities and commercial centres in Australia. Since this sub-sample is essentially a random stratified sample, it is likely that the findings are typical of that class of firm. Nor was there a bias in the way foreign producers were selected for study. Again, one would expect them to be typical of such firms, which have been extensively studied elsewhere (Yetton, Davis and Swan, 1992). There were no reasons to believe, ex

ante, or ex post, that those selected were not representative. The only remaining question is whether there are other firms that do not fall into either category. Subsequent analysis of emerging exporters for the Australian Manufacturing Council (Yetton and Craig, 1995) shows no trend to becoming an MNC among the small and growing Australian manufacturing firms.

5.5 Conclusion

The prevailing view of international competition is that firms must simultaneously be able to capture global economies of scale, be flexible and responsive to local market conditions, and leverage learning on a world-wide basis. The transnational solution (Bartlett and Ghoshal, 1989) endeavours to resolve the issues by locating them within individual executives who can think globally and act locally - global managers. In this context, it then becomes natural to ask whether European, US or Japanese cultures give their managers a competitive advantage in such an environment. The arguments made here suggest that, for some organisations, these are the wrong questions and the answers potentially misleading and dangerous. This is not to deny that many organisations have concluded that a "super-manager" is the answer to the problem that is currently difficult to resolve - global integration combined with local responsiveness. Some well known mixed mode MNCs have come to this potential solution after trying several types of structure in response to the complexity involved in operating in a diversity of markets and cultural environments.

Indeed, the study reported here initially accepted as the right one the question that is now being rejected. The methodology devised for this project was specifically designed to identify how successful Australian firms managed the factors that dominate the current literature. It was assumed that they would have a set of skills around identifying the dimensions of cultural differences, the nature of global as distinct from domestic markets, and the type of skills managers need to operate in other countries. What the research revealed, however, is that none of the sample of Australian firms that are successful

internationally identified these particular issues as problematic for them. It raises the general question of whether a distinctive set of international human resource management skills are associated with a foreign producer ideal type. If that were the case, there would be a need to extend the international strategic human resources management literature to explicitly address the needs of this class of MNC.

Chapter 6

The generalisability of Porter's "diamond" framework

6.1 Introduction

The thesis had its origins in the observation of a preponderance of foreign producers among the population of large Australian manufacturing firms (Figure 1.1). Their existence raised questions that were not readily answered by the existing literature on internationalisation and thus triggered a series of empirical investigation and theory building in relation to such firms as a viable and stable organisation form for MNCs. The preceding chapters address that research. This final chapter returns to the national industry policy context in which the phenomenon was brought to light.

The emphasis of that initial study (AMC et al, 1990) was on improving the international competitiveness of the manufacturing sector in order to increase exports of manufactured goods and, thereby, improve national terms of trade. The focus resonates with the theme underlying Porter's (1990) work on the competitive advantage of nations, which was published during the same period. The consonance of both topic and timing point to the question of whether the theory provides useful guidance for the Australian manufacturing sector.

Accordingly, against the backdrop of the research directed at understanding the Australian foreign producers, this chapter examines the applicability of Porter's (1990) theory of national competitive advantage to the Australian manufacturing sector. In this approach, both the nature and focus of the chapter differ from the preceding ones. This chapter is more in the nature of a critique and shifts from the firm itself to environmental considerations.

Porter's (1990) theory was developed from an initial study of ten countries which are predominantly mature, manufacturing based economies. The generalisability of the theory is evaluated by using two national studies subsequently commissioned from Porter by relatively small economies dependent on resource based exports -- New Zealand (Crocombe, Enright and Porter, 1991) and Canada (Porter and the Monitor Company, 1991), as quasi tests. The understanding revealed by research into the Australian manufacturing sector from the same period (AMC et al, 1990; Yietton, Davis and Swan, 1992), as described in Chapter 1 and Appendix 1, provides an additional reference. Based on this analysis, the chapter shows that there are problems in extending Porter's (1990) initial findings to resource based and relatively less mature economies. The theory emerges as one with limited application and not well supported by the evidence from the country case studies.

The first section of the chapter briefly presents Porter's theory of diamonds and national competitive advantage. In addition to the espoused formal theory, the underlying implicit argument that characterises his work on this subject is identified and articulated. The second section of the chapter then examines the research methodology used in the Canadian and New Zealand studies and discusses the implications of these two quasi-tests for the theory's validity and generalisability. A clear mismatch is evident between the empirical findings and the theoretical framework elucidated by Porter (1990, 1990a) on the one hand, and the case studies conducted in New Zealand (Crocombe, Enright and Porter, 1991) and Canada (Porter and Monitor, 1991) on the other -- both countries have virtually no strong diamonds. Nor does the theory provide insights into the dynamics by which diamonds can be developed in economies that are not already heavily industrialised.

The final section considers the possible application of the theory to the Australian economy, where similar problems relating to the predominance of resource-based exports are encountered. However, its preponderance of foreign producers highlights another issue. For such firms, investment from the home country in overseas operations is a

better indicator of international competitiveness for these industries than exports. But as the New Zealand and Canadian applications of the theory highlight, while Porter (1990, 1990a) writes about both exports and overseas operations and investment, the empirical focus is solely on exports, and therefore the highly traded goods sectors. Foreign producers are neglected. However, the analysis in Chapter 3 indicates that such firms are a significant proportion of the world's largest MNCs and may dominate some industries. Therefore, given the theory's inability to offer insights for resource-based or foreign producing industries, and its relative lack of rigorous attention to the dynamics of creating successful firms or diamonds, particularly in such industries, the chapter concludes that the framework does not form an adequate basis on which to formulate policy recommendations for the Australian economy.

6.2 The theory

6.2.1 Espoused theory

The chapter begins with a synopsis of Porter's theory as stated in *The Competitive Advantage of Nations* (Porter, 1990), which, together with its summary in the *Harvard Business Review* (Porter, 1990a) is taken as the source of the formal statement of the theory. That work begins with the perspective that the changing character of world trade is governed by a new set of dynamics. Success in international competition is now driven by competitive advantage in advanced industries, rather than the ability to exploit the comparative advantage of inherited endowments of factor production. Since knowledge intensive industries now support a high and rising standard of living, innovation, in the broadest sense, has become vital to success. "Creating competitive advantage in sophisticated industries demands improvement and innovation—finding better ways to compete and exploiting them globally, and relentlessly upgrading the firm's products and processes. Nations succeed in industries if their national circumstances provide an environment that supports this sort of behavior" (Porter, 1990, p.67).

Four determinants, which interact together in a diamond, are the forces that provide the pressures, incentives and capabilities for firms to undertake such improvement and innovation. These four determinants are (1) factor conditions, (2) demand conditions, (3) related and supporting industries, and (4) firm strategy structure and rivalry. The theory strongly emphasises that they must exist in close proximity to each other. “Competitive advantage is created and sustained through a highly localised process” (Porter, 1990a, p.74).

Individually, and as a system, these four determinants create the context within which a nation’s firms are created and compete. This diamond is mutually reinforcing. In more sophisticated industries, competitive advantage rarely results from only one determinant. Usually advantages in all four domains combine to create self-reinforcing conditions in which a nation’s firms succeed internationally—the co-location of a critical mass of favourable conditions is needed to achieve and sustain competitive success in advanced industries. However, competitive advantage in simple or resource intensive industries, and in the standardised, lower-technology segments of more advanced industries does not need advantages in the entire diamond. Factor costs are often decisive in these industries.

Foreign competitors operating from outside a nation can sometimes duplicate one advantage or another, but the system is hard to penetrate from another home base. Not surprisingly, the process of building is often protracted, but once in place, it allows the entire national industry to progress faster than foreign rivals. The four determinants can also reinforce each other negatively. For example, poor investments in human resources combined with a high cost of capital can lead to short term investment horizons that cause firms not to invest in building more sophisticated advantages.

Ultimately nations tend to succeed in those industries in which the home environment is the most challenging and dynamic. The microeconomic environment prods and stimulates firms to upgrade and widen the advantages critical to success in that industry. No nation’s environment has the requirements for success in every industry.

Because of the centrality of the four determinants of the industry diamond to Porter's theory, they are briefly summarised here.

Factor Conditions: Factors are either basic or advanced, generalised or specialised. The most significant and sustainable competitive advantage results when the specialised and advanced factors needed to compete in a particular industry are present. Basic or generalised factors are easier to replicate and, therefore, are rarely sources of sustainable competitive advantage. Not only are the specialised factor sources of competitive advantage created rather than inherited, but they can even be created in response to selective inherited disadvantages, which can generate competitive success by prodding firms to innovate. This can be described as essentially a Ricardian style argument, but one built around knowledge and technology rather than labour and land. Furthermore, those with abundant basic resources are often wasteful, while those with limited resources often use them efficiently.

Demand Conditions: The nature of home demand is the major factor influencing how companies perceive and respond to buyers' needs. Global success is likely if the home segment is more sophisticated and demanding than it is in any other country, for example where a national passion exists. In these circumstances, home demand gives companies a clear or early picture of emerging buyer needs. The size of home demand, while important in some circumstances, proves far less significant than its character. True, large home demand does give economies of scale in the domestic market, but small domestic demand may simply force companies to explore foreign markets at an earlier stage in their development. However, although firms can selectively tap into superior demand conditions in a foreign market by using a global strategy, that provides no unique advantage and is more often aimed at overcoming a deficiency in local demand conditions.

advantage. Competition with firms in foreign markets is not a substitute for competing with domestic rivals. Domestic competition automatically cancels any shared advantages that derive from being in the home nation and forces companies to move beyond those basic advantages to create more sustainable advantages.

Two other factors, chance events and government, can influence each determinant for better or for worse. Chance events can create discontinuities that allow shifts in competitive position, while government can influence and be influenced by each of the four determinants either positively or negatively. In general, “government’s proper role is to push and challenge its industry to advance, not provide ‘help’ so industry can avoid it”(Porter, 1990, p.30).

Finally, the model also includes a dynamic process of four stages of national competitive development: factor-driven, investment-driven, innovation-driven and wealth-driven. The first three involve “successive upgrading of a nation's competitive advantages and will normally be associated with progressively rising economic prosperity”. The fourth stage “is one of drift and ultimately decline”(Porter, 1990, p.546). The specific role of government is, in turn, stage dependent. While government's direct influence is greatest in the factor- and investment-driven stages (Porter, 1990, p.671), firms are increasingly the prime movers as the nation moves to the innovation-driven stage (Porter, 1990, p.672). Thus, in the investment driven stage, government “must usually take the lead in making investments to create and upgrade factors, though firms must begin to play a growing role as well”(Porter, 1990, p.551). By contrast, its role in the investment-driven phase is “markedly different from the previous one. The impetus to innovate ... must come largely from the private sector. government’s efforts are best spent in indirect ways”(Porter, 1990, p.555-56).

Related and Supporting Industries: These are industries that share common technologies, inputs, distribution channels, customers or activities, or provide products that are complementary. World class related industries can provide sources of technology, ideas, individuals and potential competitors, all of which can be advantages in international competition. Similarly, supporting industries often deliver the most cost effective or highest quality input in an efficient and sometimes preferential way. The advantage created by close working relationships is critically important. Suppliers and end users located near each other can take advantage of short lines of communication, a quick and constant flow of information, and a continuing exchange of ideas and innovations.

It follows that nations are typically competitive in industries where clusters of related and supporting industries are geographically concentrated, making the interactions closer and more dynamic. It is difficult to have the same level of interaction with foreign companies. The spawning and upgrading of new firms and industries that occur in clusters of local industries are less likely to occur if the nation relies heavily on foreign-supplier and related industries.

Firm Strategy, Structure and Rivalry: A nation's social norms and attitudes towards business influence the way firms are organised and managed, and are often reflected in government policy. The socio-political environment tends to have a distinct impact on the kinds of industries in which a nation achieves international pre-eminence. Nations will probably succeed in industries where the strategies, structures and practices favoured by the national environment are well suited to competition in the industry.

In addition, the nature of competition and domestic rivalry has a fundamental impact on the international competitiveness of a nation's firms. Local rivals provide a powerful stimulus to the creation and persistence of competitive

6.2.2 Implicit theory

The theory, however, extends beyond the formal espoused theory as described above. Lying behind the diamond framework is an implicit theoretical construct that should be made explicit because of its pervasive influence on the model's scope and causal explanations. The core concept underpinning the diamond is the centrality of innovation to sustained performance. Thus the theory addresses in different ways, and at different levels, questions about what makes innovation sustainable and whether it will be sustained in the same place. In this, a prime mover is assumed already to exist, providing the grit around which the pearl forms. Two critical forces on firms appear to lie behind these words: pressure and proximity.

Pressure is the key driver of innovation, and, therefore, of performance. In the theory, firms are portrayed as reactive and unable to overcome inertia and vested interest. A fundamental characteristic is that they perform (i.e. continuously upgrade factors and innovate) only under pressure: "to succeed, innovation usually requires pressure, necessity, and even adversity: the fear of loss often proves more powerful than the hope of gain" (Porter, 1990a, p.76). Hence the model relies on pressure being generated in as many points in the diamond as possible. So, for example, disadvantages create pressure to find improved ways of competing - as if the signs on factors are reversed: good factors (cheap, abundant) make you lazy; only problems (e.g. cost, availability) provide the pressure that makes you innovative. In addition, the more sophisticated the demand, the more pressure it places on firms, while related industries and the cluster itself also create pressure to perform and innovate. Finally, rivalry is perhaps most critical for generating pressure, and in the theory it is only domestic rivalry that really counts.

Proximity further intensifies the pressure on firms. The theory emphasises domestic rivalry, local clusters, and physical neighbourhoods. The explicit theory statement on proximity is presented in terms of information—it "increases the concentration of information, and thus the likelihood of its being noticed and acted upon"(Porter, 1990,

p.157). As well as increasing the speed with which information flows within the national industry, and innovations diffuse, it also “tends to limit the spread of information outside because communication takes forms (such as face to face contact) which leak out only slowly”(Porter, 1990, p.157). Thus the theory appears to blend together loosely Simon type “bounded rationality” with transaction cost theory (only Italians understand Italians) and a psychological model of salience/fixation (as in the eyeball to eyeball sports analogies). “Active feuds between domestic rivals are common, and often associated with an internationally successful national industry”(Porter, 1990, p.119). Not only is domestic rivalry desirable, but the benefits are even stronger if concentrated within a region, or a city (Porter, 1990, p.120). “Rivals located close together will tend to be jealous and emotional competitors”(Porter, 1990, p.157). By far the most effective form of pressure is your twin brother down the street: “domestic rivals fight not only for market share but ... more generally, for ‘bragging rights’”(Porter, 1990, p.119).

These two factors - pressure and proximity - thus answer most of the questions about innovation that appear to strike Porter as critical. The flavour of the prevailing implicit model is therefore somewhat Malthusian in its language about stimulus and punishment. “The process of modifying strategy frequently involves . . . unsettling, sometimes wrenching, organizational adjustments . . . The behavior required to sustain advantage, then, is in many respects an unnatural act for established firms . . . Few companies make significant improvements and strategy changes voluntarily; most are forced to. The pressure to change is more often environmental than internal”(Porter, 1990, p.52). Put alternatively, “The best managers always run a little scared”(Porter, 1990a, p.75). Inevitably this view influences the perceived proper role of government - to prod the recalcitrants. It stands in contrast to the alternative (Austrian) perspective in which firms, or at least some firms, are actively seeking opportunities, looking to generate and capture rents and wealth. Competition as a process is driven by such factors as search, energy and emulation.

Industries that draw on advanced technologies and sophisticated capital equipment can form a national manufacturing core. Given the theory's emphasis on innovation, these are favoured and emphasised in the analyses. Resources are assumed to be commodities whose only contribution can be as a source of upgrading to more innovative, technologically driven industries (i.e. machinery and equipment, or more advanced processing of inputs). This issue becomes highly salient for Canada and New Zealand, which both depend heavily on relatively unprocessed resource exports, and also applies to Australia.

These implicit values also influence another aspect of the theory, relating to the way international firms are characterised as likely to be either global or multi-domestic. As described in Chapter 2, the two key notions underlying the categorisation are locus of production, which can be either concentrated or dispersed, and a less well specified concept of interaction between markets - whether what happens in country A is important to the same firm's operations in country B.

Although four categories of firms (Figure 2.9) are theoretically possible with this conceptualisation, Porter focuses primarily on two possible outcomes. It is assumed that firms either concentrate, and have a global strategy, or disperse and are multi-domestic⁸⁸ (Hout, Porter and Rudden, 1982). Global configurations typically involve export, while dispersing activities involves overseas direct investment. Learning occurs most easily for global firms because all their activities are concentrated in one location and information can flow readily (Porter, 1990, pp.57-59). Foreign producers in this world have few opportunities for intra-firm learning because their subsidiaries in different national markets are geographically dispersed, and, it is asserted, because they are a collection of separate national operations that have little in common (Porter, 1990, p.58). As discussed in preceding chapters, the Australian foreign producers do integrate across dispersed locations, while Chapter 4 provides a theoretical argument for intra-firm learning in these circumstances. Porter also implies that dispersed, or "multi-domestic", operations

⁸⁸ A collection of stand-alone national operations.

contribute little to national economic performance - either for the headquarters nation, or for host countries. This issue assumes particular significance given the pattern of Australia's successful international firms.

6.3 The New Zealand and Canadian case studies

Having outlined both the explicit theoretical framework and the implicit assumptions that underpin the model, the chapter turns next to two specific applications—New Zealand and Canada—treating them as quasi-tests of the theory. Specifically, the question of whether the evidence of the case analyses provides support for the validity and generalisability of the diamond, is examined. It is found not to do so. One of the most telling and interesting findings in this context is that New Zealand and Canada have virtually no strong diamonds. In each case, however, this absence is not explicitly noted and its impact on the theory is not dealt with. These issues are considered next, under the headings of methodology and testing the theory.

6.3.1 Methodology

The New Zealand and Canadian studies both use the same methodology as that adopted for the parent work (Porter, 1990). A microeconomic, industry-level analysis which concentrates on each nation's export industries provides a barometer of the strengths and weaknesses of the overall economy, and a mechanism for identifying key leverage points and constraints. The key indicators of economic performance are productivity and upgrading to more advanced industries and segments. Several reasons are given for choosing the traded sector: because it is a large and increasingly important portion of the economies of all developed nations; because of its increasing impact on the national income of most nations; and because it provides a window into the relative performance of national economies, since it is where firms and many nations compete and can thus be compared (Crocombe, Enright and Porter, 1991, p.16; Porter and Monitor, 1991, pp.12-13). The view is expressed that examination of the non-traded sector does not provide the same opportunity for assessing the performance of a nation's firms and institutions in

direct competition with those of other nations⁸⁹ (Crocombe, Enright and Porter, 1991, p.17).

The national studies both begin with a detailed analysis of the country's economic statistics. A selection of industries in which New Zealand or Canada have a disproportionate share of world trade are then studied in detail. The share is defined as disproportionate if the country's share of world exports in a particular industry exceeds its share of total world economy exports in that year (0.3% for New Zealand and 5.1% for Canada). Finally, both studies undertake a detailed audit of the national institutional and public policy environment, to assess its impact on the competitiveness of national firms. Each concludes with a set of recommendations to government and firms.

The fact base for New Zealand consists of twenty industries,⁹⁰ which together accounted for 85% of 1989 export earnings (\$18.4 billion total). Ten of the industries studied are traditional resource-based exports, and together accounted for 76% of exports from all twenty industries, and 64% of New Zealand's total 1989 exports. The other ten studied are dubbed "emerging" industries. Many of these contribute little to New Zealand's export revenue - they accounted for only 2.5% of export income from the industries studied and 2.1% of New Zealand's total 1989 exports. Electric fencing, for instance, which is one of the four case studies reported in full, and presented as a manufacturing success, generated only \$30 million in exports. But this group of industries was reported to be of particular interest for the study because they are not resource-based, and use "advanced" technologies, which is interpreted as evidence of upgrading. Only four industries are discussed comprehensively in each report. Analysis from the others is synthesised into a general discussion of the overall health of the nation's diamonds.

⁸⁹ Nevertheless, as the analysis in Chapter 3 indicates, firms in these sectors, which are typically foreign producers, are well represented among the world's largest MNCs.

⁹⁰ Eighteen are listed here in Table 1. The other two are "manufacturing" and "education". The competitiveness of these two broad industry groups was apparently not assessed (Figure 48).

The 25 industries studied for Canada represented a significantly lower proportion of export revenue—approximately 37% of total 1989 exports⁹¹. This primarily reflects the exclusion of most resource-based and foreign-owned manufacturing exports from the study. The report notes that an effort was made to represent all main Canadian exporting sectors: processed and unprocessed natural resource industries; manufacturing and service industries; industries with a high degree of both foreign and domestic ownership; and some that are significant to particular regions of the country.

This choice of methodology brings with it two sets of embedded problems, first in undertaking an analysis of successful industries and nations as the basis for identifying causes for their success, and second in using a case study method.

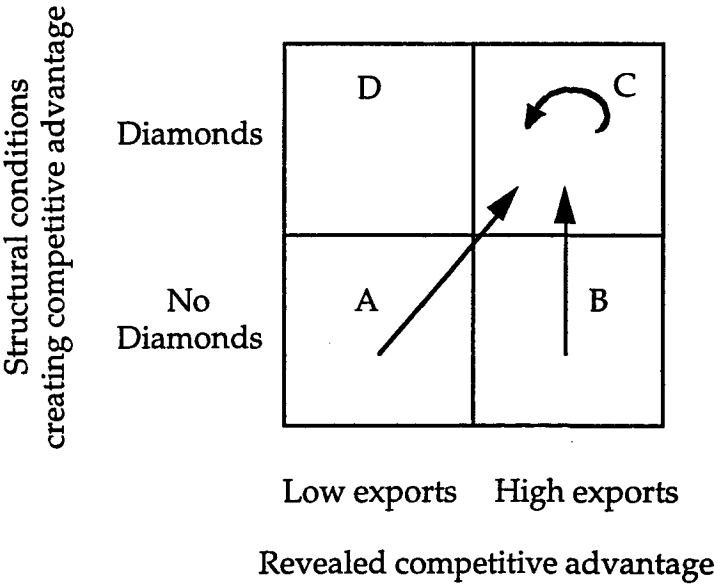
Studies of successful entities, be they firms, industries or nations, suffer from well-recognised validity threats. Of these, the lack of a control group is probably the most important. In the case of the ten nation study for *The Competitive Advantage of Nations*, this applies at both industry and national level. The focus was on the link between international competitiveness, as measured by exports, and the existence and strength of diamonds. Therefore exporting industries were examined. In this chapter, the two national case studies are used to partially address this methodological shortcoming. Although the purpose of the studies of New Zealand and Canada was the provision of advice, those two studies can nevertheless be treated as quasi-tests of the theory. Both are examples of relatively new, resource-based economies, in contrast with mainly older and industrialised economies originally studied.

A second methodological threat is the lack of a hypothesis testing methodology. This can be illustrated by devising a matrix to represent the types of generic policy recommendations that flow from the analysis. They typically take one of three forms: create diamonds where firms are not exporting, strengthen diamonds where they are weak, or ensure that existing strong diamonds do not decay. Figure 6.1 provides an

⁹¹ These industries are listed in Table 6.2.

illustrative schema. Revealed competitive advantage, as measured by relative competitiveness of national exports in that industry forms the horizontal axis, and structural conditions creating competitive advantage, or diamonds, form the vertical axis.

Figure 6.1: Policy options implicit in Porter’s model



Porter’s three types of policy recommendations can then be represented as efforts to move industries from one quadrant to another. For instance, developing successful exporters by creating strong diamonds involves moving industries from quadrant A (low exports/no diamonds) to quadrant C (high exports/strong diamonds). The diagonal arrow traces that path. The second type of recommendation typically made is illustrated by the vertical arrow which moves from quadrant B to quadrant C. It involves ensuring that industries which already have high exports but not strong diamonds (quadrant B) be “supported” by developing those diamonds—in other words, moved up to quadrant C. Finally, where industries are already in the quadrant C, with high exports and strong diamonds, they should be reinforced. This is represented by the looped arrow. While the policy recommendations flow from identifying the quadrant an industry currently occupies, and assume that quadrant C is the goal, they offer little guidance about how to move to this point.

The matrix in Figure 6.1 highlights one of the principal threats to Porter's findings. In starting with successful exporters, and then identifying their common characteristics, namely the presence of diamonds, the research does not use a hypothesis testing methodology. If the initial studies had investigated a more representative industry sample that included, for instance, some non-exporting industries or firms (quadrants A and D), the hypothesis that strong diamonds exist in strong export industries could have been tested. However, the selection methodology, which predominantly identifies industries in quadrant C, means that tests of these hypotheses, or of the implication that quadrants B and D only exist as transitional states, are not possible.

This observation does not simply reflect an in-principle preoccupation with theoretical rigour. The industries that are omitted—those in quadrants B and D—include at a minimum much resource-based activity, and most overseas investment by firms in less traded sectors. In spite of the acknowledgment that overseas investment is important (Porter, 1990, p.25) and references to the significance of overseas investment and operations, all the reported data in the analyses is for exports. This omission is particularly significant in practice because the overlooked industries are arguably the most relevant for both New Zealand and Canada, and as the thesis has already identified, also for Australia, because most of their existing firms operate in these areas. The theory, as conceived and applied, therefore emerges as most relevant to mature, manufacturing based economies.

Validity threats arising from the bias in the selection of cases to be studied occur at the national level as well as for industries. The theory implicitly suggests a causal relationship between the existence of strong diamonds and strong national economic performance, although this mechanism is not explicitly articulated. New Zealand appears to be a confirming, or non-contradictory, case. The conclusion is that the economy has not performed well, and it is as if the study sets off to look for evidence of the lack of upgrading industries and diamonds. It finds the expected pattern. In the next section it will, however, be suggested that the evidence which is accepted as confirming the

hypothesis actually suggests that the wrong phenomenon may be being explained. Specifically, small and isolated or peripheral economies may face different problems from mature manufacturing based ones.

On the other hand, the Canadian data provide strong prima facie evidence against the hypothesised link between diamonds and strong economic performance. Canada's economy has clearly performed well over a long period, even though most of its export revenue comes from resource-based industries supplemented by the activity of foreign-owned, rather than domestic manufacturing firms. One of the responses to this apparent disconfirming evidence is to downplay the performance: "Over the 1980s, Canada's economy performed quite well" (Porter, 1991, p.6) - where "quite well" includes second highest real economic growth between 1983 and 1989 of the seven leading industrial nations (G7). Another of the responses is to assert that this performance is fragile because it does not rest on constantly upgrading (i.e. innovative), domestically owned manufacturing industries and sectors - or strong diamonds. In other words, contradictory empirical evidence is not addressed. Thus New Zealand and Canada demonstrate two different things. The evidence of New Zealand does not disprove the hypothesised link between national economic performance and diamonds, but does suggest that other issues may be the critical ones, while the Canadian evidence provides a more direct threat.

An additional methodological problem stems from the attempt to generalise from a few particular cases. Moreover, the cases are not described using a consistent framework and objective measures wherever possible. Such case studies, used as the basis for drawing inductive conclusions, do not necessarily readily generalise. When the new cases of New Zealand and Canada do not fit the inductive conclusions, the response is to provide another level of inductive analysis, without a re-examination of the original ten national case studies. One example is that the New Zealand study applies the industry structure framework from the earlier work, *Competitive Strategy* (1980) to supplement the application of the diamond (Crocombe, Enright and Porter, 1991, p.51). In the New Zealand dairy study, both frameworks are intertwined (Crocombe, Enright and Porter,

1991, pp.58-71). Thus, as more studies are carried out, the model is extended and complicated, rather than sharpened and made more powerful. The result is a sequentially complex world, instead of a parsimonious and powerful one. As a result, the recommendations that follow are less and less grounded in the data.

Similarly, the work is weakened by a methodology in which many categorisations are subjective and descriptive. For instance, whether domestic demand anticipates demand in other nations is judged *ex post*. Additionally, clear or articulated measures for strength of elements of a diamond are lacking—on what basis is a demand condition judged to be strong, medium or weak? For example, no attempt was made to find any sort of uniform indicators of “sophisticated demand”: why New Zealand farmers are more sophisticated than German, or Swiss or Australian farmers is simply asserted rather than explained, and the extent of their sophistication is not ranked in any way.

6.3.2 Testing the theory

Canada and New Zealand provide useful “tests” of the diamond theory in their similarity in terms of being primarily resource-based, and relatively small economies, and their contrast as proximate economies - Canada neighbours a large market, while New Zealand is distant from any large market. Neither study provides empirical evidence in support of the theory. In this context, the most telling evidence on the basic application of the model appears in Tables 6.1 and 6.2, which set out the relative strengths of diamonds in the industries selected for study from among the successful exporters. They clearly show that neither Canada nor New Zealand has any complete diamonds, taking into account either the four main conditions, or the two supplementary elements.⁹²

Table 6.1, adapted from Figure 48 (Crocombe, Enright and Porter, 1991, p.96), presents 18 of the successful New Zealand exporters studied.⁹³ A black circle indicates that an element of the diamond is considered strong, a grey circle represents a moderate influence

⁹² The additional reporting of the role of government and the role of chance is also included in Tables 6.1 and 6.2.

⁹³ Two of the industries studied, manufacturing and education, were not reported in Figure 48.

and a hollow circle shows low influence. The industries had been grouped into factor or demand driven categories. In Table 6.1 they have been further grouped into the additional categories used for New Zealand (Crocombe, Enright and Porter, 1991, p.96, Figure 47), of traditional, growing and emerging. It is worth commenting again on the fact that the ten industries identified as emerging (i.e. half of the industries studied), together accounted for only 2% (\$400 million) of total New Zealand exports in 1989, with software exports comprising \$100 million of that amount. Electric fencing, cited as a success, had export earnings of \$30 million—over 50% of world exports, in an industry whose global production totalled only \$200 million in that year.

The report (Crocombe, Enright and Porter, 1991) notes that very few New Zealand industries have developed multiple sources of competitive advantage. This is an understatement. Table 6.1 shows that only one of the industries studied (yachts) has at least three of the four main elements of the diamond effectively in place. Even among the five demand-based industries (construction, electric fences, engineering consulting, software, yachts), which one would expect to exhibit a high influence in at least two of the diamond elements, only two (yachts and electric fences) show high influence for any of these four elements.

The successful Canadian exporters show a similar pattern, summarised in Table 6.2, which is based on the report's Figure 5.1 (Porter and the Monitor Company, 1991, p.140). The twenty-five industries are grouped into the four additional categories that the report identifies for Canada: resource-based, market-access based, innovation-driven and other. What evidence is there that the successful export industries are driven by the diamond? Table 6.2 shows that in the eleven innovation-driven industries, only three (ice skates, central office switches and geophysical contracting) are "High" on at least three of the four main elements of the diamond. If the two additional elements of government and chance are included, then a fourth (consulting engineering) has three elements of the six in place.

Table 6.1: Sources of international competitive advantage in selected New Zealand industries

	Factor Condt'ns	Demand Condt'ns	Related & Supprt'g	Strat, Str, Rivalry		Role of Govt	Role of Chance
FACTOR DRIVEN							
Traditional							
Dairy	●	-	●	-		-	●
Meat	●	-	○	○		○	○
Tourism	●	○	○	○		○	●
Wool	●	-	○	○		○	-
Growing							
Apples	●	-	○	○		-	●
Fishing	●	-	-	○		○	●
Forest products	●	-	-	○		●	●
Kiwifruit	●	-	○	○		○	●
Emerging							
Cut flowers	●	-	-	-		-	-
Deer	●	-	●	-		-	●
Goats	●	-	●	-		-	●
Methanol	●	-	-	-		●	●
Wine	●	-	-	○		-	-
DEMAND DRIVEN							
Growing							
Construction	●	●	○	○		●	○
Emerging							
Electric fences	●	●	●	●		●	●
Engineering consulting	●	●	○	○		●	○
Software	●	○	○	○		-	●
Yachts	●	●	●	●		-	●

Source: Adapted from Figure 48, *Upgrading New Zealand's Competitive Advantage*, p.96

Legend: ● high; ● moderate; ○ low - no influence

Table 6.2: Sources of international competitive advantage in selected Canadian industries

	Factor Condt'ns	Demand Condt'ns	Related & Supprt'g	Strat, Str, Rivalry	Role of Govt	Role of Chance
RESOURCE-BASED						
Newsprint	●	○	○	○	○	-
Market pulp	●	○	○	○	○	-
Nickel	●	○	●	●	●	-
Aluminium	●	○	○	○	●	●
Atlantic groundfish	●	○	●	○	negat.	-
Styrene	●	●	●	○	○	-
Electricity	●	●	●	●	●	-
Beef Processing	●	●	○	○	●	-
Manufactured housing	●	●	○	○	●	-
MARKET-ACCESS BASED						
Auto parts	○	○	○	○	●	-
Auto assembly	○	○	○	○	●	-
Pulp and paper equipment	○	○	●	○	○	-
INNOVATION- DRIVEN						
Ice skates	●	●	●	●	○	-
Urban rail	●	●	●		●	●
Flight simulators	●	○	○	●	○	-
Industrial explosives	●	●	●	●	●	-
Commuter aircraft	●	●	●	○	●	●
Central office switches	●	●	●	●	●	●
Geophysical contracting	●	●	●	●	●	-
Consulting engineering	●	●	○	●	●	-
Whisky	●	○	○	●	●	●
Life insurance	●	●	○	●	●	-
Human biologicals	●	○	○	○	●	●
OTHER						
Waste management	●	●	○	○	○	●
Radiation therapy equip't	●	○	●	○	●	-

Source: Adapted from Figure 5.1, *Canada at the Crossroads*, p.140

Legend: ● high; ● moderate; ○ low

The basic application of the theory captured in these two tables shows then that neither New Zealand nor Canada have any diamonds. Unfortunately, a similar test is difficult to apply to nations cited in the parent work, which sets the study and theory development out in more detail. Two conclusions can be drawn from this empirical finding: either both New Zealand and Canada face serious economic problems because they lack these industry patterns, or the diamond does not apply to all national economies. While New Zealand's economic performance is in no sense strong, and its prospects far from promising, that is not the case for Canada. As the study reports, its long term economic performance by any number of indicators has been strong and improving, without specific indications of marked decline in prospect. The cautionary comments about complacency, and the probable negative effects of the lack of diamonds are assertions, with little evidence that the lack of diamonds has been damaging. If Canadian industry were a test of the diamond, the theory would not be supported.

Additionally, as suggested in the preceding section, the evidence of New Zealand may suggest more about the costs of isolation and size than about the diamond theory. A small domestic market in combination with physical isolation may just mean that any successful firms will inevitably migrate. On the one hand, the problems associated with a small domestic market are dealt with by a recommendation to use international markets. With electric fencing, it is noted that "the small size of the New Zealand market for electric fences and the intense rivalry among local firms has made building an export business an imperative" (Crocombe, Enright and Porter, 1991, p.85). But on the other, it is acknowledged that successful New Zealand companies in advanced industries have moved their headquarters domicile. For example, Glaxo, one of the world's leading pharmaceutical companies, was founded in New Zealand in the 1920s, but eventually made its United Kingdom branch the head office. "The UK offered a larger, more advanced market and a superior research environment. The New Zealand branch is now a subsidiary that serves the local market"(Crocombe, Enright and Porter, 1991, p.153). And in the case of the software industry, while "Kiwi ingenuity" and determined

entrepreneurs have given local companies a foothold in the global industry, these have not been enough to hold some successful companies in New Zealand. "Pressures to remain close to the international customer base, pools of skilled personnel and innovation in technology made being headquartered in New Zealand increasingly problematic" (Crocombe, Enright and Porter, 1991, p.92). "FACT and PAXUS, two promising New Zealand companies, have moved their headquarters overseas. Inadequate supplies of software professionals, limited finance and a lack of leading-edge demand all contributed to their departure"(Crocombe, Enright and Porter, 1991, p.153). Arguably, the phenomenon is a process of migration out of geographically isolated small economies. The evidence begs the question that is not addressed - whether size will always be an issue in a small domestic market, geographically isolated from most of the world's large and sophisticated customers.

At the extreme, the most pessimistic conclusion from this may be that there is not a winning game for small isolated economies. Porter (1990) quite explicitly states in other contexts that size of the domestic market is not an issue, and claims that small size has not been a problem for Switzerland, for example. But Switzerland, which directly borders densely and largely populated nations of similar living standard is not representative of all small countries.⁹⁴ Nor are any of the original ten nations studied. In fact, faced with the evidence and reality of New Zealand's extremely small, and isolated, economy, the study steps backwards on the proximity requirement. The report concludes that small size is a constraint that can be overcome by international trade: "New Zealand cannot rely solely on the domestic base to increase its standard of living." (Crocombe, Enright and Porter, 1991, p.38) And "...the small size of the New Zealand market means that a successful product quickly saturates the local market. Firms that seek significant growth have to expand into international markets" (Crocombe, Enright and Porter, 1991, p.91). However, Porter also argues that using

⁹⁴ In New Zealand's case, as with Australia, small size is compounded by geographic isolation from large developed markets. Although Switzerland is small, it is afforded a degree of compensation in this context by being effectively closely integrated in a continental land mass.

elements of another nation's diamond, such as demand, is not a long term strategy for national competitive advantage. In Zealand's case though, the study does not explain how or why firms would bring their global headquarters back home, when home is such a small, isolated market.

How then are these apparent contradictions to the theory dealt with? One mechanism that allows the apparent contradictions to be sidestepped is the approach to the case studies, and their relationship with the recommendations. This relationship is, at best, weak. Crudely put, in each of the two national studies, the case analyses are sandwiched between the theory statement and a set of generalised recommendations. While the summary analysis of the four determinants in each nation is related to the explicit diamond theory, the four New Zealand case studies reported in full are more historical descriptions of the industry development than theory driven analysis based on empirical evidence. More importantly the recommendations bear little relation to findings about the New Zealand diamond. Most derive directly from the theory as formally set out in more detail in his major study (Porter, 1990). In a sense, they could have been written without any study of or case analysis in New Zealand. Many of the recommendations that appear to be related to the empirical findings about New Zealand draw more on traditional macroeconomic theory and a conviction that the role of government is to demand and challenge, not to nurture and support. They are characterised by the "pressure" model of motivation that has been implicitly adopted, rather than an analysis of industry diamonds. So, for example, the report notes "the laudable and proper desire to provide for all of society's members has resulted in a social-welfare system that has unnecessarily limited incentives for individuals to save or upgrade their skills and has outstripped the nation's ability to fund it" (Crocombe, Enright and Porter, 1991, p.150). It is easy to sympathise with such a statement, but far more difficult to find empirical support from the test of the theory.

In order to deal with the preponderance of resource-based New Zealand and Canadian industries, the analysis of those two economies draws on relatively peripheral elements of

the diamond theory. While these industries are discussed, they are not central to the theory. For the most part, the assumptions about them and their potential contribution to national economies are not well developed concepts that have been integrated into the diamond framework. Thus, although these allegedly “factor-driven” resource industries are referred to often in the parent work, the treatment of them oscillates. For instance, although it is acknowledged that “a nation with unusually abundant natural resources for its size, however, can enjoy high national income despite a position in the factor-driven stage” (Porter, 1990, p.564), a comment is added: “though it is not likely to be sustainable indefinitely” (Porter, 1990, p.564). No detailed evidence or rigorous analysis is offered in support of this assertion, which appears often throughout *The Competitive Advantage of Nations*. Nor is it clearly established that they are indeed driven by basic factor advantage. Elsewhere, the problem associated with attempts to group industries to reflect different determinants of competitive success is acknowledged: “the problem with such generalisations is that technological change and the globalization of strategy have blurred the boundaries nearly every industry in the 1980s is knowledge intensive. Traditional industries ... are being revolutionized” (Porter, 1990, p.777, fn 39). This is echoed in the New Zealand study which notes that their dairy industry does provide growth opportunities in some markets and segments, and makes the general observation that the further the product is from a commodity item, the higher the margin and the lower the volatility in prices (Crocombe, Enright and Porter, 1991, p.63). As is discussed in more detail in the next section about Australia, many resources are no longer commodities. Since resource-based industries are central to the existing configuration of both the New Zealand and Canadian economies, this failure to do other than make frequent, but conflicting assertions about them is a liability.

In the case of Canada, apparent contradictions to the theory are dealt with in a number of different ways. For instance, firms in resource-based industries, which comprise the bulk of Canadian exports, are said to be able to succeed with only one of the elements—basic factor conditions, and basic, rather than advanced ones, in place. An alternative

explanation, weakly staying with the diamond framework, might be that since these industries usually have highly competitive international markets, the required demand characteristics of the diamond are globally dispersed, rather than concentrated within one nation, such as Canada. Rivalry also exists, but again, globally.

However, if elements of the diamond do not need to be co-located for resource-based industries, then the same may be true for other industries. For example, if it is possible to access demand in a market with foreign competitors, then access to that market may be a perfect substitute for domestic rivalry. If the diamond is not local, then the entire edifice becomes unstable.

So then, not only are data that appear in Table 6.2 not proof of the theory, but the evidence of Canadian industry also does not inform decisions about what government policy should be. In applying the theory to Canada, the study effectively says the government has to create domestic rivalry where none exists. The consequences of this are that the requirements of the diamond begin to be relaxed - either by finding rivals, formally or by international bench marking, or by using demand conditions elsewhere (Porter, 1991, p.364, pp.370).

In this however the report appears equivocal about the US market for Canadian industry. On the one hand, its use is recommended, albeit with caveats: "In recent years, a number of initiatives promise to have a positive effect. The Canada-United States Free Trade Agreement, which has been a powerful catalyst in favour of competitiveness, will strengthen competition in the domestic market and spur more Canadian firms to participate in international markets" (Porter, 1991, p.60, Porter, 1991, p.322-23). "The geographic locus of competitive advantage can cross national borders. In the case of Canada, the relevant arena of competitive advantage for a particular industry may encompass adjacent parts of the United States. . . . it makes sense for Canadian firms to reach into the United States diamond to strengthen their competitive position or overcome weakness in the Canadian diamond. . . . But . . . firms can only take advantage of the

United States diamond selectively. Basic factors and demand are easiest to access. In contrast, industry-specific infrastructure, a highly skilled workforce, and certain types of supplier and customer relationships are difficult for a country's firms—including Canada's - to source at a distance" (Porter, 1991, pp.78-80, Porter, 1991, pp.31-32). "Despite . . . proximity to the United States, Canadian industries have not typically been driven by demanding domestic customers to seek higher order competitive advantages. Canadian buyers are rarely at the leading edge in demanding innovative consumer goods. They are also reluctant—at least compared to American consumers—to voice complaints or to utilize consumer advocacy agencies to pressure providers of goods and services to enhance their products" (Porter, 1991, p.52, Porter, 1991, p.226-7).

At the same time, the theory seems to treat the United States market a weak demand/rivalry element, and not part of the global market: "Competing globally means competing beyond North America" (Porter, 1991, p.370). "Most industries—particularly outside of the resource sector—that do export are oriented primarily to the United States rather than to broader global markets. Because of this inward focus, many Canadian firms . . . have not felt the pressure from world class competitors or extremely demanding buyers to improve productivity or produce higher value products" (Porter, 1991, p.143). "Canada's rich natural resource endowments, its proximity to the US, and a history of insulation from international competition have combined to allow Canadian industry to achieve an enviable economic performance" (Porter, 1991, p.3).

Although Porter is critical of the current performance of US firms, he does say that they have been successful. But as these excerpts illustrate, there is equivocation about why Americans, who have been demanding buyers from American firms become careless when buying from the Canadians. The crucial issue may be access for Canadian firms (although why trade from Toronto to Chicago must be less effective than trade between Los Angeles and Chicago is not explained). Alternatively, the problem has its genesis in the poor quality of the American diamond. Elsewhere, there is recognition that there will often be rivals and demand elsewhere in the world, and that these can make a contribution

to competitiveness. For example, in the study of the printing industry, Porter writes: “The successful Swiss firm, Witag, was a defacto part of the German cluster” (Porter, 1990, p.194). Essentially, however, in the case of Canada, “localised” is equated with “domestic”, without establishing how or why that is the case. Language about domestic diamonds is necessary for a theory of national competitive advantage, but most of the argumentation about localised clusters deals with regional concentration, rather than the effect of geographically arbitrary national boundaries.

Both studies, therefore, raise substantive questions about the theory that call into doubt whether the theory really is one of the competitive advantage of nations. At best, its scope is considerably more limited and specific. The theory may usefully explain competitive advantage in manufacturing of traded goods for which large scale plants are required. The theory does not adequately explain how such industries might be created where they are not already in place. Nor has it been validated with respect to small economies or resource industries. Finally, the linkage between the theory and government policy is not obvious.

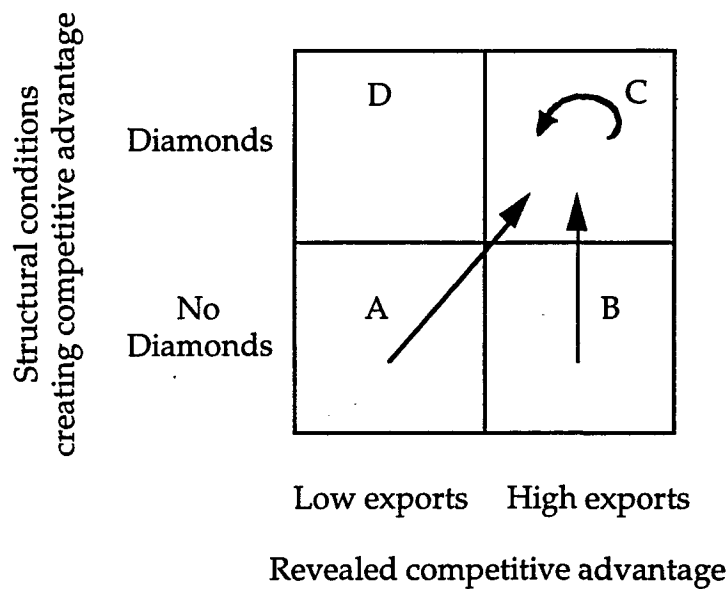
6.4 The Australian case

Given the application of Porter’s framework to New Zealand and Canada, what might be expected were it to be used in a study of Australia? To answer this question, types of successful Australian firms are first mapped onto Figure 6.1, which is repeated here for the reader’s convenience.

The theory focuses on firms and industries that export a significant portion of their output, since that behaviour provides a “unique window” into the sources of national economic prosperity. (Porter, 1991, p.17, Crocombe, Enright and Porter, 1991, p.16). The traded sector “... has particular leverage for productivity growth, especially in smaller and mid-sized countries. In addition, the traded sector is where firms from a multiplicity of countries compete” (Porter, 1991, p.9). Accordingly, the cases selected for detailed study in terms of the diamond are predominantly export oriented firms or industries. In *The Competitive Advantage of Nations*, these tended to be manufacturing

firms with significant export sales. However, both New Zealand and Canada unavoidably included a higher proportion of resource-based industries. More importantly, both had few firms in quadrant C of the matrix shown in Figure 6.1.

Figure 6.1: Policy options implicit in Porter’s model



What would be the situation for Australia? Who are the large exporters that would form the basis of a Porter-style analysis of national competitive advantage? Australia’s 50 key export industries, using Porter’s methodology for determining export competitiveness, are ranked in the appendix to the New Zealand study (Crocombe, Enright and Porter, 1991, p.189/90). All of these are resource based. This points to a significant side-effect of the disproportionate share measure. Even competitive manufacturing firms in a country with a strong resource base, like Australia, will tend to have disproportionately low exports as a statistical artefact. As with Canada and New Zealand, there would be few, if any firms or industries in quadrant C. In light of the analysis and conclusions drawn about resource-based industries in the New Zealand and Canadian studies,⁹⁵ most Australian export industries, which are resource-based, would be considered to fall into quadrant B (high exports with weak domestic diamonds).

⁹⁵ The New Zealand and Canadian studies incline to the view that resource-based industries are generically predisposed to rely on factor conditions. An abundant resource endowment is seen to have blunted pressures for upgrading and change in many of these industries, and to have created a complacent government and industry mindset.

At the same time, this export-based approach applied in Australia's case would fail to identify the group of successful internationally competitive Australian manufacturing firms which formed the trigger for the research in this thesis. These are the foreign producers - organisations which compete by locating small to medium sized production facilities in the markets in which they sell, rather than exporting. As noted in earlier chapters, most of these firms compete in less traded industries such as building products or specialised food ingredients, in which foreign production is the predominant form of global competition (Yetton, Davis and Swan, 1992). While they have high levels of overseas direct investment, their export levels are necessarily low. This finding receives support from the taxonomic analysis of 443 of the world's largest MNCs reported in Chapter 3.

Given this configuration of existing Australian firms and industries, how would policy recommendations flowing from the diamond theory apply? The first - to sustain firms in quadrant C by sustaining their diamonds - would not be relevant for Australia, given the lack of firms in this segment. However, the recommendation that firms in quadrant A - low exports/weak diamonds - be moved to quadrant C is potentially more helpful. Therefore the light the theory would shed on the development of emerging or latent exporters is examined below. The usefulness of the paradigm for what are treated as the two deviant cases - resources and foreign producers - and the implications of these two groups for the theory are also discussed.

6.4.1 Emerging exporters

The conventional view of the dynamic path of internationally competitive firms, as outlined in Chapter 2 (section 2.3.1), is that a firm progresses from being a local operator to exporter and finally to being a mixed mode MNC, with relatively high levels of both foreign production and exporting. This model in part underpins Porter's claim that foreign production usually occurs together with a high level of exports (Porter, 1990, p.740). This conventional view would be consistent with moving from quadrant A (low

exports/weak diamonds) to quadrant C. However, the sequence of development is unclear. Does the initial domestic success create a diamond, or does that emerge later, after exports are well established? In other words, does the path from quadrant A to C pass through quadrant B or D? The theory seems silent on the subject. Although one might infer from case studies (e.g. Italian tiles) that the initial prime mover gains a window of time, how it will use that to best advantage is unclear. Hence government's role is also unclear.

The theory says little about either the dynamics of creating a diamond, or which type of firms might seed it, how they might emerge, or their subsequent pattern of growth, and the factors vital for that (Porter, 1990, p.407, pp.122-23). The theory as explained and applied focuses on how the four determinants operate as a virtuous cycle, but offers little insight into strategies for triggering or guiding the process. As few as six pages are devoted to this issue (Porter, 1990, pp.675ff). Most deal with qualifications and difficulties rather than providing positive or actionable recommendations. One of the clearest conclusions is that the challenge is daunting for developing nations or those wishing to upgrade.

This highlights the absence of a theory of firm development. In particular, the theory does not address how to ensure that more new firms emerge in those upgrading industries, or deal with how to ensure more of those emergent firms become strategic exporters. Since relatively little is written or known about how to achieve either of these objectives, or how to accelerate either process, contribution to this area would have been extremely valuable. Importantly for Australia, for instance, the theory does not address whether government policies to reinforce a diamond constitute efforts to have a higher percentage of firms move along the hypothesised trajectory, or to speed up that process. The recommendations in the New Zealand or Canadian studies do not directly refer to the creation of new firms, or deal comprehensively with the potential of foreign firms to contribute to upgrading an economy. The possibility of using them in a development strategy is acknowledged, but the treatment is again disappointingly brief for nations such

as Australia which do not have a three hundred year old industrialised economy that needs revitalising, but must grow from a different base (Porter, 1990, pp.678-681).

Instead of a theory of the development of firms, two much more generalised views of the dynamics that drive the formation of new firms are provided. One is the stage model of national competitive development, from factor-driven to investment-driven, then innovation-driven and finally wealth-driven. This last stage is one of decline. However, although the view of the role of government is stage driven, in the sense that the appropriate policies differ according to which of the four phases of economic development the nation is in, it is not clear where Australia, Canada or New Zealand would be placed in that historic process. This is partly because of both normative and descriptive equivocation about the sequence of this development. Empirical support for the four-stage model is not provided. If however, Australia and Canada are in the factor-driven stage, and are two of the wealthiest countries in the world, and have been for the past eighty years, then how is it valid to describe the benefits of that stage as not indefinitely sustainable? Had the original study included nations other than older industrialised economies, the theory might have grappled with this issue.

The other view relates to the progressive development of the diamond. One version, illustrated for the Italian ski boot industry, shows an industry beginning with a related industry, in this case hiking boots, and then moving to exploit factor and demand conditions.⁹⁶ However, later, Porter notes that the development of the diamond usually parallels the four stages, i.e. from factors to investments to customer-driven innovation (Porter, 1990, p.547). Neither can be readily translated into specific policies. The lack of clarity and consistency on development of new firms raises the deeper concern that the theory has little to offer an economy such as Australia on this subject. The theory would imply that the lack of firms in quadrant C is a sign of a poorly performing economy, but its prescriptions do not adequately address or deal with the problems and issues this conclusion raises.

⁹⁶ Fig.4-8, p.163.

6.4.2 Resource-based industries

As noted earlier, resource-based industries often fall into quadrant B of Figure 6.1, with high exports but weak or no diamonds. Where a nation's resource industry has a diamond with related and supporting industries, such as capital equipment suppliers, it is usually because that nation was active in that industry in the nineteenth century.

Consequently it is naive to suggest that a New Zealand pulp and paper machinery manufacturer could create a stronger diamond by developing a local equipment supply capacity, since this is likely to involve head to head competition with well-established Swedish, Finnish or American equipment suppliers, who have the benefit of economies of scale. Effectively then, most resource-based industries in countries that are not already industrialised will be found in quadrant B. This is potentially a problem for the theory, but there is an implication that the industries themselves are not worthwhile. For a conclusion that carries such major implications for a resource-based economy, such as those of Australia, Canada or New Zealand, its premises are disturbingly unexamined in the theory.

To an extent, this is not surprising since none of the countries in *The Competitive Advantage of Nations* has a resource-based economy. Instead, most rely heavily on global manufacturing for which the home base is critical in terms of economies of scale and scope, as well as marketing and product design. Exports from this home base are significant. Although few resource-based industries were studied, the conclusion is nevertheless drawn that these are unattractive industries. That view is not revised or examined in either the New Zealand or Canadian studies.

The main statement of the theory argues that advanced factors (digital data equipment, engineers, research centres) are most critical to competitive advantage, while the importance of basic factors (natural resources, climate, location) "has been undermined by either their diminished necessity, their widening availability or ready access . . . on international markets" (Porter, 1990, p.77). In reaching this conclusion, Porter appears to

assume that resource-based industries are in the same category as low technology or low skill industries, in the sense that both depend on basic factors (Porter, 1990, p.77). The argument is that not only are the returns on these basic factors low, irrespective of their location, but that competitive advantage in such industries is also unsustainable because “global competitors can easily circumvent” the basic factors on which it depends (Porter, 1990, pp.72-73).

The classification of resource-based industries with those characterised by low technology and skills is, however, tenuous. In Australia, mineral prospecting and extractive techniques are frequently highly specialised, and dependent on advanced technologies. Nor are returns on these natural resources uniformly low. By focusing on exports, the theory ignores returns to shareholders and other measures of wealth creation. On these measures, resource-based industries have been successful in Australia over long time periods. While firms producing products which can be classified as commodities may offer minimal returns, that does not apply where the resource product is differentiated, either in terms of quality or suitability for specific applications. This phenomenon occurs across a whole range of natural resource industries, from coal to wheat. For example, with the increasing sophistication of firing technologies, which require specific and reliable performance, coal is no longer a commodity, but a differentiated product, for which all grades do not have ready substitutes. And for their part, pasta manufacturers will pay a premium for product with a particular gluten content, and will not accept substitutes.

The theory seems to imply either that resource-based firms are not innovative or, that if they are, innovations will focus on process, not product differentiation, and will be easily emulated. Embedded in the definition of innovation is an assumption about cycle times, particularly in comparison with those of competitors. Short time frames between each new development are implicitly critical. The time scale of innovation is not however constant across industries. The experience of Australia's large and successful mineral resource firms suggests time scales in a number of these industries are significantly

longer than in manufacturing, as a consequence of the technology itself. For example, to go from exploration to production may take fifteen years.

Thus the dismissal of the resource-based industries as a potential source of competitive advantage may be unwarranted. In addition, if the theory is wrong about resources, then the prescription - to “de-emphasise, quit, move downstream” - may be damaging. An alternative might be to “grow in areas of strength, build on cost, location and supply advantages”. The focus then shifts to how Australian firms can expand or otherwise improve performance of their resource-based businesses. While some of the supposed limitations on Australian firms are controlled by government (environmental policies, ports, infrastructure), others within the control of the firm may well surface from a study that does not begin with a bias against resources. For example, marketing, joint venturing with customers, and gaining control over logistics world-wide may emerge as critical issues.

6.4.3 Other forms: foreign producers

The existence of this group of Australian firms, and their distinctive internationalising characteristics, was identified in a study for the Australian Manufacturing Council (AMC et al, 1990). As reported in Chapter 1, it found that although there were a number of successful international manufacturing firms in Australia these firms did not export much. They also therefore would not be seen in the diamond theory’s window into the sources of national economic prosperity. Such firms also exist in most of the industrialised nations represented in Stopford’s (1982) listing of the world’s largest MNCs.

However, this type of successful MNC is also not covered by the theory. In the way it is represented in Figure 6.1, these firms would lie in quadrants A or D, with low exports. Their industry characteristics around international competition suggest that these firms are not latent exporters, so policy efforts that treat them as such, aimed at shifting them to quadrant C, would be misdirected and wasted. The theory does not recognise or make this point, but it is highly significant for formulating Australian industry policy.

It is worth noting here that in the principal work (Porter, 1990), and the Canadian study (Porter and the Monitor Company, 1991) there is occasional reference to overseas investment, together with exports, as an indicator of international competitive success. But throughout that work and in the applications of the theory to both New Zealand and Canada, only export figures are reported or used as the critical test of international competitiveness. If, however, the two by two analysis schematised in Figure 6.1, is extended to include high overseas investment as equivalent to high export levels as a measure of competitiveness, then the possibility of foreign producers falling in quadrant C arises.

As discussed in Chapter 2, for Porter, foreign producers most commonly take a multi-domestic approach in which “competition in each nation (or small group of nations) is essentially independent. In the extreme case of a multi-domestic industry, there is no issue of national advantage or international competitiveness. Foreign ownership [in these less traded industries] will tend to be largely passive and involve only modest control from central headquarters” (Porter, 1990, pp.53-54). The evidence of the global success of foreign producers in world markets and of the key role headquarters plays in coordinating and controlling these firms’ globally dispersed operations, in the observed Australian firms at least, brings Porter’s assertions about and tendency to downplay this form of international competition into question. It would seem, on the basis of evidence relating to the actual operations of Australian resource-based firms and foreign producers, that the usefulness and completeness of the theory are questionable.

Although foreign producers are among the world’s most successful firms, they do not meet Porter’s requirements for “global industries” (i.e. highly traded industries) as the “battleground on which firms from different nations compete in ways that significantly affect national economic prosperity” (Porter, 1990, p.54). Most of the Australian foreign producers are in less traded industries and operate small to medium scale plants in multiple locations, across many different countries. Home base is not the only research,

production or learning site, and may not be the key site. Much learning occurs by frequently building new plants, or by acquisition and bringing them to best practice.

In light of the theoretical arguments in Chapter 4 for that mode of learning as part of a foreign producer ideal type configuration, it could be argued that the theory's downplaying of the foreign producers misses an important issue, because as a consequence it limits itself to interaction between markets (e.g. the common brand) and overlooks other forms of interaction within the firm. The diamonds and their emphasis on home base implicitly assume that competitively useful learning can only occur domestically. Both the evidence of the Australian foreign producers and the theoretical arguments made in Chapter 4 point to the possibility of a foreign producer's ability to capture learning across different locations, and provide internal competition, which is not self-evidently less effective than external competition. In the diamond theory, rivalry is limited to inter-firm rivalry, but for foreign producers, which have multiple operations for similar products using similar processes, intra-firm rivalry can operate highly effectively.

There is also an unstated but strong assumption in the theory that large, single point production domestic plants are the foundation of national competitive advantage - Boeing is the answer. As such, in the theory, most foreign producers are not an optimal strategy, and are mainly adjustments to work around trade or other barriers (Porter, 1990, p.57-58). Indeed, it may be that the theory ignores this group because they appear to offer few benefits to the headquarter's national economy. The dislike of this form is evident.

"..... many Swedish, Swiss, and American multinationals moved abroad before World War II when trade barriers as well as transport costs were more significant, one reason they often have widely dispersed activities compared to Japanese or German firms in the same industry. A dispersed configuration is frequently hard to integrate and consolidate in one place, because local country managers desire to retain power and autonomy. The inability to shift to more concentrated and coordinated strategies necessary for competitive advantage is one reason why firms lose advantage in some industries" (Porter, 1990, p.58). These words contain an implicit cry of "come home America's foreign producers".

But the relevance of this concern for Australia is less than compelling, given that Australia's foreign producers are not engaged in large scale traded goods production.

The evidence from these firms also indicates that while firm size may be comparable across industries, plant scale size is not (Yetton, Davis and Swan, 1992). That appears to be determined instead partly by technology, where in some instances there are no increasing returns to scale beyond a relatively low point, and partly by degree of tradeability of the product and local market density. The Australian foreign producers have tended to develop in those industries where medium-scale plant size predominates. In these industries, the implicit Porter view of a large domestic plant in which are concentrated all the strategically important activities and learning is not appropriate. While Australia is unlikely to develop firms in Porter's global industries, other forms of competitive advantage may be sustainable.

At the same time, the theory's failure to examine foreign producers seriously, or therefore recognise them as an effective form of global competition, is understandable from an American perspective. For any US foreign producer, the domestic division will be sufficiently large that it makes sense to regard that and global headquarters as synonymous. In Australia however, this is not the case since the firm's domestic market will inevitably be degrees of magnitude smaller than overseas ones. In a sense, the theory's discounting of overseas operations and investment and its emphasis on the centrality of physical proximity for effective learning and innovation may be its greatest weakness. As noted earlier, although it recognises the possibility of creating some competitive advantage by dispersing activities, the empirical methodology relies solely on exports.

An emphasis on domestic market conditions can only be problematic for small, isolated economies such as Australia. Exporting firms with large scale home-base plants will simply not evolve in, or be sustained primarily by, such an environment. Nevertheless, the experience of Australia's foreign producers provides evidence that alternative firm

structures and strategies can form the basis of international competitive advantage. It shows that transfer of learning can occur effectively between multiple locations, and need not be sourced from the home base. The critical issue appears to be the capacity of the firm over time to capture and embed the learning, rather than the constancy of location in which it first occurs. Their experience suggests there is a sustainable way to tap into the market demand determinants of foreign diamonds.

There is also some evidence that a portfolio of plants allows foreign producers actively to balance the weakness in some national diamonds (in their industry) with strengths drawn selectively from other, and not necessarily Australian, diamonds. So, for instance, a Japanese firm may be used to source state-of-the-art technology, and an Australian plant to provide the competition for operations in a third country where the industry is still fragmented and the level of competition low.

In a sense, these two types of firms or industries - resource-based and foreign producers - which are deviant cases in the diamond theory's context, and therefore largely unexamined, are the most crucial for Australia. They also highlight difficulties with one of the notions central to the diamond framework - proximity. One could argue that all of the diamond conditions exist globally for the large, and particularly mineral, resource based industries. For example, rivalry is no less intense for being dispersed around the globe, customers no less demanding, and the firms themselves no less responsive or innovative. For their part, foreign producers call into doubt the central proximity notion. In their case, the diamond exists intra firm, for all that it is geographically dispersed. The distinctive competence and competitive advantage of such firms is built in large part on their ability to turn the apparent competitive disadvantages of geographic distances and less traded goods into a source of advantage.

6.5 Conclusion

This review of the application of the diamond theory to Canada, New Zealand and Australia points to three conclusions. The first is that the theory is not one of national

competitive advantage, but rather, a theory about the competitive advantage of firms and industries within nations, though even the emphasis on nations (physical proximity) is progressively watered down. Second, the theory is not proven, either in the original work or subsequent studies. The absence of proof may be the result of study designs that emphasise description over validation. However, where tests (albeit weak ones) of the theory are possible, as in Tables 6.1 and 6.2, the data does not support the theory. Third, the theory is not complete in two key respects. It does not adequately deal with dynamics (i.e. how new successful firms emerge) and what might be done to encourage this, and it misdescribes or omits important types of firms such as those in non-traded sectors and resources. Put another way, it could be seen as a theory for refocussing American or European firms on the essentials of global manufacturing in or near large markets, given that many of the ingredients of the diamond are already in place for them. Thus while the theory may apply to a subset of industries and nations, it does not generalise to all industries and nations.

Chapter 7

Summary and conclusion

7.1 Synopsis

This final summary chapter provides a brief reprise of the main findings of the thesis and identifies implications for research.

7.1.1 Overview

The research in this thesis was triggered by the observation of a set of manufacturing firms that appeared to present a paradox. Although successful in international markets, their operating mode did not conform to expectations about successful MNCs. Specifically, they exported very little, choosing instead to serve foreign markets almost exclusively by foreign production. Dominant models of internationalisation devote little descriptive or normative attention to such firms. Although the theoretical possibility of foreign production as the primary means of serving foreign markets is routinely acknowledged, the central research agendas have historically focused on problems related to other forms of international competition. Additionally, field research into the Australian foreign producers revealed that the way they compete, by integrating key operational and management activities across their global network, differs from the assumed pattern of operation for foreign producers. The solution proposed by the thesis is to extend empirical research and theory building to include foreign producers as a separate category of MNCs that have a distinctive and effective operating mode.

As such, the thesis takes a contingency perspective, which holds that a firm's strategy and organisational arrangements should be consistent with each other and, as a corollary, that different strategies require different configurations. The research extends existing

conceptualisations of international strategy by defining it in terms of the foreign market servicing choice a firm makes. Four categories of MNCs are proposed, making it apparent that much of the research attention has focused on two of the categories, global exporters and mixed mode MNCs, and that the foreign producer category by comparison is relatively neglected by organisation theory and strategy process researchers. Further, the foreign producer category is a material one. Classifying some of the world's largest MNCs on the basis of their foreign market servicing strategy reveals that a significant proportion of them (24.8%) compete as foreign producers. Accordingly, research attention to such firms represents a move towards theoretical completeness. The first step taken in this process is to develop a theoretical model for successful operation of the foreign producer form, by building an ideal type foreign producer configuration.

In turn, categorising MNCs on the basis of their foreign market servicing strategy raises a series of questions about a range of managerial and national policy aspects of internationalisation. Thus the two final chapters examine implications for international strategic human resources management and for government policy setting.

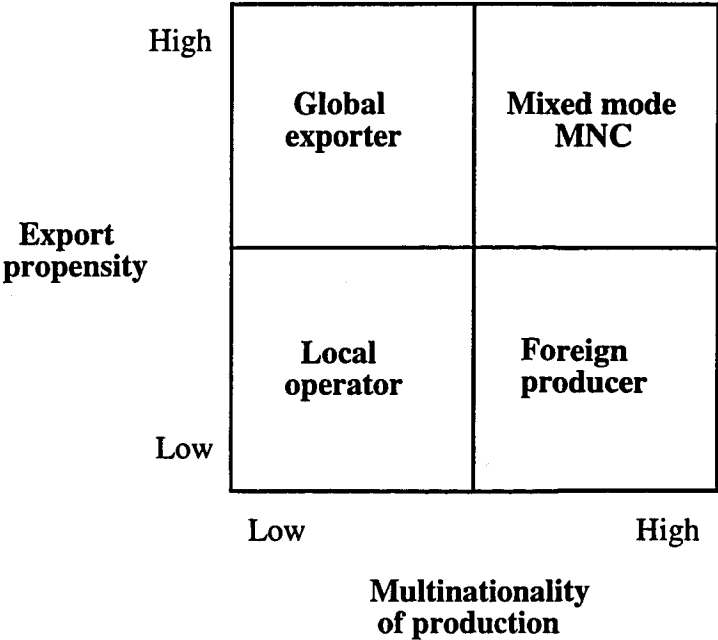
As such, the thesis undertakes exploratory research, which sets out to investigate the phenomenon of a neglected set of MNCs, and to utilise that understanding to complement existing theory of internationalisation. It addresses a series of sequentially revealed dimensions of a gap between the observed phenomenon of foreign producers and the internationalisation literature. Together, the loosely related set of papers that comprise the thesis represent a beginning rather than a complete resolution to the process of adding to understanding in this area. A summary of the specific focus and contribution of each chapter within this context is provided in the following section.

7.1.2 Summary of chapters 2 to 6

Chapter 2 articulates the nature of the gap between the observed data on foreign producers and the internationalisation literature that becomes apparent as a result of classifying MNCs according to their foreign market servicing strategy. Four categories, each

representing a distinct pattern of MNC behaviour, are identified: “local operators”, in the bottom left quadrant have only limited exposure to foreign markets; “global exporters”, in the top left quadrant, engage in high levels of exporting from home base and relatively little foreign production; “foreign producers” undertake significant foreign production but little exporting from home base; while “mixed mode MNCs” have high levels of both (Figure 7.1, reproduced here from Figure 2.2 for the reader’s convenience).

Figure 7.1: Categorisation of MNCs



Because the classification schema has not been used elsewhere, and is central to the research, its antecedents are identified. The dimensions it measures (export propensity and multinationality of production) are used in economics based analysis that tends to focus on national or industry patterns. Treating them conjointly as an indicator of firm strategy represents an extension of research practice. The schema also extends existing strategy process research by explicitly focusing attention on a relatively neglected dimension of a firm’s international strategy.

The contingency theory perspective that is adopted throughout the thesis is identified. It implies that each of these strategy-based categories requires an appropriate and distinctive

set of organisational arrangements. The chapter then goes on to show that although the global exporter and mixed mode MNC both attract explicit research attention, existing research in three main areas does not address configurational issues for the foreign producer category.

The first of the three major streams of research which comparatively downplay the foreign producer form of competition is the Uppsala stages model of internationalisation. It effectively defines the foreign producers quadrant (bottom right) as an empirically empty set. The second is internationalisation research primarily based in organisation theory. It proposes models for the internal configuration of mixed mode MNCs, often to allow them to capture economies of scope and scale globally. The focus is on managing and benefiting from the complexity involved in that mixed mode of foreign market servicing, typically combined with product diversity. Using Bartlett and Ghoshal's (1989) categorisation schema as the exemplar of this research, the chapter shows that the observed Australian foreign producers would be allocated to a category that is not well covered in terms of description, analysis and configurational advice. It also notes that the observed foreign producers achieve a degree of global integration which is not anticipated in the Bartlett and Ghoshal (1989) schema. Finally, the chapter examines Porter's (1990) work on national competitive advantage, which provides prescriptive guidance on the industry conditions most conducive to sustaining global exporters. It shows that while he acknowledges the theoretical possibility of integrated foreign producers he argues that, in practice, there is a low probability that this set will be occupied. Instead, foreign producers, he suggests, will operate as "multidomestics" with little, if any, integration between dispersed production sites.

The second chapter concludes by noting that the thesis complements existing strategy process models in its focus on the neglected foreign producer category. As well as addressing an issue that is highly salient in the Australian context, this represents a move towards theoretical completeness.

Chapter 3 examines the question of whether such firms are confined to Australia and simply a national phenomenon, or alternatively, represent a relatively neglected subset of MNCs. It shows that, rather than being unique to Australia, foreign producer firms account for 24.8% of large MNCs world-wide. Such firms occur across countries and industries, as well as predominating in some industries. A summary conclusion that may be drawn is that foreign production centred strategies and organisational requirements are material for a significant subset of MNC managers.

In exploring the generalisability of the phenomenon, the chapter applies the classification schema to 443 of the world's 500 largest multinational enterprises in 1981, as identified in the *World Directory of Multinational Enterprises 1982-83* (Stopford, 1982). While the analysis is taxonomic rather than predictive or testing a causal model, it does examine three propositions. The first is that large foreign producers exist in significant numbers in MNCs domiciled outside Australia. Conventional views described in the previous chapter imply that, as a strategy for large MNCs, foreign producing would either not exist or not be effective. However, the evidence of the large Australian domiciled manufacturers paints a different picture. This proposition relates directly to the generalisability of the data beyond a single national context, and defining the dimensions of the literature-data gap which forms the core of this thesis. The two additional propositions are derived from the existing literature, which shows evidence for both country and industry differences in aggregated patterns of foreign market servicing behaviour, but does not examine firm strategy in these terms. They are that the proportion of foreign producer firms varies across country and industry respectively.

The study draws on summary information provided by Stopford and Dunning (1983) in a companion volume to the *Directory* (Stopford, 1982). Although the use of this data set does not generate a random sample from a theoretically defined population of MNCs, it does provide for inclusion of a diverse set of industries, and for inclusion of subsets of both US and non-US firms which researchers treat as representative of the population of the world's largest MNCs. The ratios of export propensity and multinationality of

production are used to locate each firm on the classification schema described in Chapter 2.

The results provide strong evidence for the significant incidence of the foreign producer firm and a significant positive size effect strongly suggests the argument that such firms are competitively viable. Proposition 1 is supported: foreign producers account for 110 of the 443 *Directory* MNEs. Proposition 2 is supported: the proportion of foreign producer firms varies across countries constituting, for example, 45.5% of the stock of UK MNCs, and, by contrast, only 3.5% of the large MNCs in Germany, 7.1% of those in Sweden, and none of those from Japan. The distinctiveness of the originally observed Australian pattern dominated by foreign producers is confirmed.

Proposition 3 is also supported: the proportion of “foreign producer” firms varies across industries. In some industries (food, drink, building materials, drugs, oil) significantly more firms select a foreign producer strategy than a global exporting one, while in others (aerospace, electrical, machinery, autos), global exporting is a relatively frequent choice and there are few foreign producers. These results provide some evidence for the existence of industry level determinants such as minimum efficient scale, transport costs and value of product, that differentially favour exporting or foreign production, and to which some firms respond.

However, the analysis does not provide evidence that either industry or country alone explains the choice of foreign producer strategy. It is evident from the firm-level categorisations of foreign market servicing strategies of these large MNCs that in some instances, country and industry effects interact.

In summary, the chapter shows that firms which compete through a dominant foreign producer strategy, with a low reliance on exports from their domestic base, constitute an important class of firms among the world’s largest MNCs. The existence of foreign producers in the ranks of the world’s largest MNCs suggests that it is a form of MNC which offers certain competitive strengths. Understanding how that form is competitively

successful is therefore the subject of the next chapter of the thesis. Accordingly Chapter 4 begins to fill the gap between the observed foreign producers and the existing literature by describing and defining the characteristics and competitive advantage of the foreign producer as an ideal type of organisational form for multinationals.

In doing so it addresses two dimensions of the data-literature gap. The first is the relative lack of attention to the organisational arrangements required for effective performance as a foreign producer. The second is the discrepancy between the assumed operating mode for foreign producers, as multidomestics, and the operating pattern observed in many large Australian MNCs (Yetton, Davis and Swan, 1992). The operating gestalt of those foreign producers not only differs from that of the global exporter, transnational and multidomestic forms, but also has a distinctive coherence and pattern, which suggest the possibility of a configuration for integrated foreign producers. The chapter therefore builds on the insights generated by earlier qualitative research to define an ideal type foreign producer that exhibits constrained local responsiveness with respect to its product lines and global integration around common production processes and platforms.

As such, the chapter is developing theoretical proposals rather than providing a description of existing firms (Doty and Glick, 1994). It provides a basis for explaining performance - an existing organisation's deviation from the ideal type would be associated with lower levels of performance, rather than for categorising organisations. The chapter adopts a configurational approach, in which the coherence or fit among all the elements contributes more to performance than any fit between two elements. Drawing on sociological concepts adopted by Gresov and Drazin (1997), it identifies four "structures", which are here termed building blocks, that allow the organisation to perform three "functions" required by the environment, and which here are termed capacities.

The foreign producer and global exporter are modelled as orthogonal ideal types. The foreign producer is characterised by constrained intra-firm competition, multiple loci for

learning, continuous incremental change and selection into conducive environments. By contrast, the global exporter relies on inter-firm competition, a primary single locus for learning, discontinuous change and responsiveness to its environment. For each dimension, the traditional theoretical approach, as apparent in the global exporter form, is contrasted with alternate characteristics and underlying theory for the foreign producer form.

The chapter then shows how the patterns adopted by a foreign producer for each of these four building blocks combine in varying distinctive ways to generate three capacities which help the foreign producer to succeed in an international competitive environment. Specifically, the ideal type foreign producer achieves economies of scale across plants through multiple plant learning, continuous incremental change and intra-firm competition. This contrasts with the global exporter's economies of scale at product unit level within a plant, typically driven by high share of large (ie global) markets. Further, the foreign producers manage business risk through selecting into environments and pursuing continuous incremental change, while being based in a nation with a strong "diamond" minimises risk for a global exporter. Finally, the foreign producer resolves the conflicting demands of global integration and local responsiveness by decoupling product and process, whereas the global exporter resolves that tension by decoupling the value chain, typically separating product development (and often marketing) from sales and distribution.

The fifth chapter begins to explore the implications of categorising MNCs according to their foreign market servicing strategy for other aspects of the internationalisation field. It presents the results of field research designed to identify Australian firms' skills for international operations.

The research did not confirm the two working hypotheses, which were derived from the existing literature. The first, drawn from the international SHRM literature is that the firms would have specific skills, many of which would be HRM-related. That literature

currently emphasises the importance of “global managers”, who have a strong interest in and tolerance for other cultures as well as a sound understanding of how a particular decision might affect a company's many competitors and markets around the world. They can “think globally and act locally”. The second working hypothesis, derived from research on Australian firms and the concept of imprinting, is that they would have developed unique HRM solutions.

However, the majority of issues identified in the unstructured interviews were business-related rather than HRM-related. Four categories of skills emerged from analysis of the interview transcripts. First, it was taken as given that high quality products/services are offered at the right price, customer needs are understood and that the firm is already successful in the local market. Second, accessing overseas markets was a necessity for continued growth or even survival. Third, entering foreign markets requires understanding of the market being entered; identifying a trustworthy “guide”; persistence, and relies as much on customer “pull” from sophisticated and informed purchasers, who are just as willing to invest in search processes as are the firms wishing to sell, as on firm “push”. Fourth, to manage the international operations once they were in place, foreign subsidiaries are routinely staffed on a permanent basis by host country nationals. Close communication is maintained with local managers of either sales and service subsidiaries (for emerging exporters) and of production facilities (for foreign producers). Identified problems related to the burden of on the owner/CEO for the emerging exporters, and the strains imposed on those small firms by continuing rapid growth. Technical skills are considered crucial to the continued success of most of the firms, but are not in short supply.

As this summary shows, HRM skills, and in particular, finding and managing “global managers” are not placed high on the list of key factors identified for international operations. As such, the findings constitute yet another dimension of the gap between data and theory that is the theme of the thesis.

The solution proposed in the chapter is to relate the MNC categories used for the thesis to the international HRM contingency model. This makes apparent that many of the international HRM practices address problems faced by only one of the four categories - the mixed mode MNC. By contrast, the Australian portfolio of successful firms contains two other dominant forms. One is foreign producer firms, which compete internationally by operating small to medium scale production facilities across multiple locations and selling locally rather than exporting. The other form is small global exporters mostly high growth firms, in high technology markets, for whom exports are a major source of sales from earliest years. The chapter suggests that, instead of emphasising individual based solutions, both sets of firms partition issues into business and industry skills, and skills relating to country-specific resources and knowledge. The core business skills are managed centrally for the entire scope of the firm's operations, while the country-specific skills, which allow a firm to leverage its competitive advantage in foreign markets, are managed locally and are acquired in each national marketplace.

In summary then, it is proposed that the lack of MNCs in the Australian portfolio of manufacturing and service firms explains why none of the firms studied raised the issues that predominate in the management literature on skills for international operations originating from the US and Europe. The research raises the general question of whether the firms identified in Chapter 3 as foreign producers that operate in the way identified for the ideal type in Chapter 4 view skills for international operations in a similar way. If that were the case, there would be a need to extend the international strategic human resources management literature to explicitly address the needs of this class of MNC.

The final chapter returns to the policy context, which revealed the original trigger for the research. This chapter is more in the nature of a critique and shifts from the firm itself to environmental considerations. It examines the generalisability of Porter's (1990) theory of national competitive advantage which was developed from an initial study of predominantly mature, manufacturing based economies. National studies subsequently commissioned by New Zealand and Canada are used as quasi tests of the theory.

The case analyses are found not to provide support for the validity and generalisability of the diamond theory. In particular, neither have strong diamonds. In each case, however, this absence is not explicitly noted and its impact on the theory is not dealt with. The analysis shows that there are problems in extending Porter's initial findings to resource based and relatively less mature economies.

The final section considers the possible application of the theory to the Australian economy. It concludes that the diamond framework does not form an adequate basis on which to formulate policy recommendations for the Australian economy, because it fails to deal with the three major classes of firms in the national industrial portfolio - resource based firms, foreign producers and emerging (ie small) manufacturing exporters.

First, the 50 key export industries for Australia according to the methodology for determining export competitiveness are all resource based. However, resource based industries are downplayed as a potential source of competitive advantage, being viewed as characterised by low technology and skills. The chapter argues that this is tenuous. More importantly, however, this view of such industries means policy issues related to them are not addressed by the theory. In addition, applying the export-based approach in Australia's case would fail to identify the category of manufacturing firms which formed the trigger for the research in this thesis, and which are also to be found among the world's largest MNCs - foreign producers. Finally, the theory, as explained and applied, focuses on how the four determinants operate as a virtuous cycle, but offers little insight into strategies for triggering or guiding the process. How to ensure that more new firms emerge in those upgrading industries, or that more of the small emerging exporters become strategic exporters are not addressed. It would seem therefore that the usefulness and completeness of the theory for Australia are questionable. More generally, the review suggests while the theory may apply to a subset of industries and nations, it does not generalise to all industries and nations.

In summary then, the thesis focuses on a class of firms competing internationally that have not been previously studied. It shows that they exist in significant numbers, builds theory for how they compete and begins to point to some of the major consequences for the completeness of existing models of international competition.

7.2 Implications for research

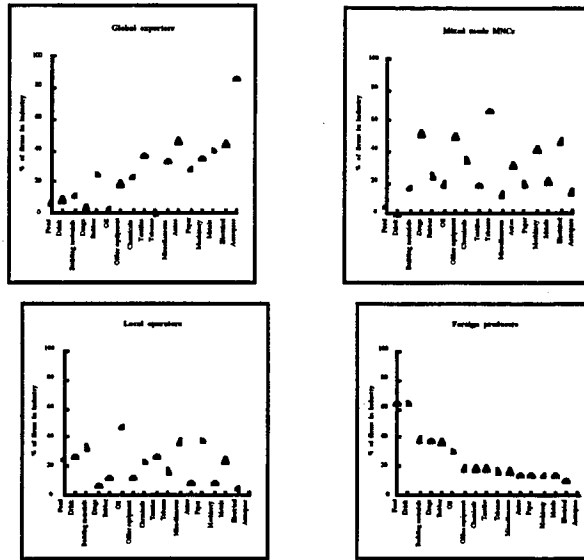
Perhaps the most compelling question that arises as a consequence of this stream of research relates to the contingencies that determine which foreign market servicing strategy a firm selects, and in particular, the reasons a firm chooses to be a foreign producer.

7.2.1 Industry effects

One speculation, arising from the initial research into the observed Australian foreign producers, is that the extent to which it operates in a traded or less traded goods sector, here termed tradeability, will be the determinant of foreign market servicing strategy. Specifically, markets characterised by high tradeability would fit with Porter's global firm strategy (1990), while a less traded sector would favour production in the local market and, hence, a foreign producer form.

The initial study of this phenomenon (Yetton, Davis, and Swan, 1992) provided some evidence for industry effects of this nature. The Australian foreign producers are all in product markets where the value of the product is low relative to transport costs, or the product is difficult to transport (fragile or perishable) and economies of scale do not increase beyond small to medium-sized markets. They engage in foreign production to service foreign markets, rather than to gain access to a low cost or assured source of raw materials or labour. Additionally, the analysis presented in Chapter 3 showed a degree of orthogonality between the global exporter and foreign producer strategies at the industry level, in at least some industries. Figure 7.2 (reproduced here from Figure 3.11 for the reader's convenience) reflects this variation in strategic choice across industry.

Figure 7.2: Comparison of representation of firms types in each industry



Significantly, the order in which industries are arrayed in this figure, based on the proportion of firms in the industry that are foreign producers, is broadly consistent with the rankings in Kobrin's (1991) index of integration.⁹⁷ That index is a measure of intra-firm trade. Few firms choose a foreign producer strategy in the industries with the highest levels of intra-firm trade,⁹⁸ and few firms choose a global exporter strategy in the industries with the lowest levels of intra-firm trade. Therefore one might expect both the global exporter and foreign producer forms to be successful, but in different international technology regime environments. However, the question of the effect of transport costs and the definition and effect of economies of scale remains an extensive and unresolved domain of inquiry (e.g. Kobrin, 1991; Birkinshaw, Morrison and Hulland, 1995). Interestingly, in a range of industries, similar proportions of firms choose global exporter and foreign producer strategies.

⁹⁷ Drugs (or pharmaceuticals), an industry in which there is a high level of national government regulation, is an exception. It could be construed as an industry in which product value, EOS and transport costs might indicate the desirability of global exporting, but the existence of local regulatory demands requires multiple foreign production sites; or alternatively as an industry with high potential for price discrimination.

⁹⁸ Although significant levels of foreign production are engaged in by mixed mode MNCs, which are to be found in those industries.

7.2.2 Country imprinting

At the same time, the research undertaken to date indicates that the administrative heritage and history of MNCs has influenced the character of their international development. Chapter 3 contains some discussion of apparent country differences in firms' choices of foreign market servicing strategy. Returning to the originally observed Australian data, these effects are also arguably evident.

One might speculate that the Australian foreign producers' capacity to manage an interlinked network at the same time as providing local autonomy around the issues that are specific to a location is a consequence of Australian geography. Australia is slightly larger than continental USA, with the distance between Sydney and Perth the same as that between New York and Los Angeles. However, the population is one tenth that of the US, with more than 80% living in six urban centres which are separated by vast distances. The largest of these cities has a population of only four million. Thus, before moving overseas, foreign producers learnt to manage across large distances, at the same time as being responsive to quite distinctive local conditions.

A flavour of the operating implications of this geography can perhaps best be imparted by briefly comparing the experience of a roof tile manufacturer with operations in the UK and Germany with that of the Australian foreign producers. The European firm, which runs large scale plants from which it trucks product up to 400 or 500 miles, has concentrated the evolution of its technology on scale efficiency improvements such as increasing machine speeds, perfecting palette technology etc. Australian tile producers however had to contend with extremely poor national road and rail systems. To take a more extreme example, an Australian glass container producer has no alternative but to locate its factories in every city in Australia given prohibitive levels of breakages involved in surface freight. Against this background, the concept of a dominant centre with unlimited reach did not develop in the locally owned manufacturing firms that emerged in Australia.

The geographic influence was compounded by the historical growth process of these firms, which were mainly formed by progressive mergers of local, family owned operations. A more federal structure of organising naturally evolved in this milieu. In addition, because none of the firms' production or sales locations were significantly larger than any other, the major gains were usually only captured by improving performance across all locations. Thus the Australian firms tended to see themselves more in terms of a network than as a dominant central headquarters with satellite subsidiaries. As a consequence, going overseas represented a relatively straightforward extension of the network. The difference is that, overseas, they effectively outsource the management of the local component. These alliances are not, however, analogous to the race to learn that characterises some international strategic partnerships, where one or both partners seek to internalise the skills of the other (Hamel, 1991). The local partners are almost never both global rivals and industry competitors (cf Doz, Prahalad and Hamel, 1990). Further, both partners typically have well-specified and complementary, rather than competing, goals for the alliance, and the foreign producers have become adept at identifying suitable partners and contracting with them.

The suggestion of geographic imprinting also has support from Egelhoff's (1988) work on the structure of MNCs, building on Stopford and Wells' (1972) study. The findings suggest that the structure with which US and European firms went international also reflected country differences. European firms are seen to extend the product functional structure established within Europe to embrace the markets entered later. One can speculate that European firms learned to control sales and marketing in neighbouring countries and over time to extend manufacturing into those adjacent countries without needing to limit the reach of the core product-based management team. By way of contrast, the US firm faced a larger discontinuity when establishing a presence in Europe. To give sufficient focus to these operations, an international division was created, typically with responsibility for operations outside America.

In a similar vein, it is suggested that Australian MNCs learned to operate their own distinctive culture: relatively self-contained business units operating largely autonomous plants in separate state or regional markets. The Australian environment placed a premium on the development of control systems that allowed what was learned in one state or location to be transferred to other locations without frequent face to face coordination. In a sense, multiple parallel operations across Australia created a naturally occurring benchmarking environment in which the successful surviving firms were those who learned best to achieve consistent performance and transfer of know-how without diluting local business unit autonomy. This tight/loose structure is both efficient and effective for their environment, and one that lends itself readily to operating internationally.

In this context, it is interesting to note, as described in one of the illustrative cases provided in Chapter 4, that Burns Philp learnt how to operate multiple fresh yeast plants while Gistbrocards which had access to dense local markets pursued a path that involved developing large scale yeast technology. In the same industry, two different technology regimes developed in two different countries, each forming the basis for a different style of international competition. That both strategies could be effective within the same industry is, in turn, consistent with an equifinality approach to contingency theory.

7.2.3 Dynamics of internationalisation

Such consideration of how a firm comes to adopt one foreign market servicing strategy rather than another opens up the question of the dynamic path a firm follows as it internationalises. This has almost universally been assumed to follow the Uppsala stages model, which has a firm progressing from local operator to global exporter to mixed mode MNC. This clearly reflects the path historically followed by the large Swedish and other MNCs. But as the experience of the Australian foreign producers and the findings in relation to size reported in Chapter 3 indicate, at least one set of firms has followed a different trajectory, that tracks directly along the horizontal axis, culminating in the foreign producer category. Likewise, some of the world's largest MNCs appear to have

travelled straight up the vertical axis to become global exporters. Whether those firms whose internationalisation process is relatively recent will remain in those quadrants or, over time, will also shift to the mixed mode MNC category is an empirical question.

Nevertheless, if one assumes, as is implicit in the theoretical arguments made in Chapter 4, that the global exporter and foreign producer are relatively simple forms to manage, particularly in comparison with diversified mixed mode MNCs, there is a question about whether firms that are currently in the mixed mode category might revert to either the foreign producer or global exporter strategy. Accordingly further research could usefully examine the path a broad population of large MNCs takes over time, in terms of the categorisations used for the thesis.

In conclusion, the thesis simultaneously completes the set of organisation forms for international competition by researching foreign producers, and opens up a set of questions about the contingencies that drive their performance and the dynamics associated with their internationalisation process.

Previous research on Australian firms⁹⁹

International firms, particularly in the manufacturing sector, are widely perceived to be central to resolving the problem of Australia's declining terms of trade. Their prospects, and how to enhance them, constitute a frequently, if not heatedly debated topic. Nevertheless, it is not clear that the assumed or implicit models that underlie much of the public debate are appropriate. If this is the case, it will inevitably cloud the definition of the problem and make movement towards solutions itself problematic. This paper proposes an alternative framework for evaluating the prospects for Australia's international firms. It asks a series of questions, not usually posed in this context, about whether Australian firms do, or are likely to, conform to the pattern of behaviour that is assumed to generate exports; and if not, about what might be some alternative ways of closing the balance of trade gap.

A1.1 Prevailing assumptions

We take as a starting point the conventional image of the growth of an international firm. Much of the current debate is underpinned by the implicit assumption that this dynamic path takes the following route. A firm begins with a distinctive competitive advantage, performs well and grows in the domestic market. At this stage it is often an import substitutor. It then becomes an opportunistic exporter, typically operating overseas through sales agents in other countries. In this initial exporting phase, domestic consumption is still the primary focus of production. Exports are used to take up any over-capacity, but would not disrupt supply to domestic customers.

⁹⁹ Published as Craig, J. and P. Yetton (1994) 'Australia's International Firms: Contributions and Prospects'. In I. Marsh (ed.) *Australian Business in the Asia-Pacific Region*, Longman Cheshire, Melbourne, pp. 32-67. Throughout the paper, the term multi-domestic is used to refer to the Australian foreign producers.

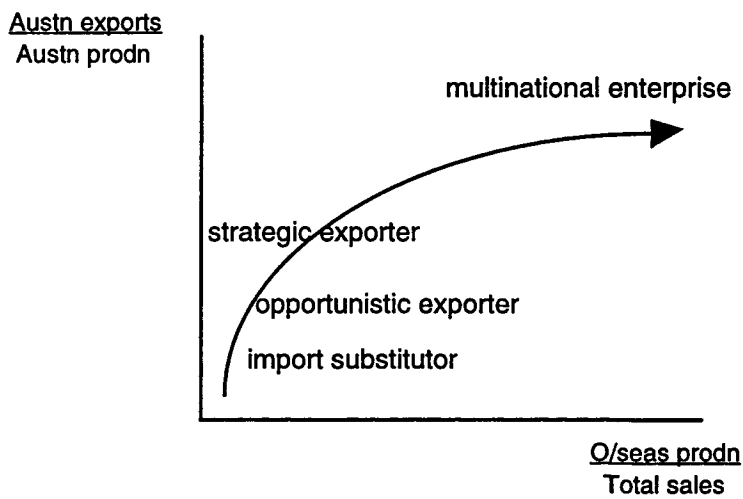
As it continues to grow, the firm then becomes a strategic exporter, producing specifically to service overseas markets. A distribution system, comprising a number of sales offices in the export markets, is established at this point to reflect the central place of exporting in the firm's strategic agenda. Both the cost and the nature of a sales office network, in contrast to agency arrangements, reflect this change. The set up costs are significant and require that the firm has reached a certain minimal scale to be willing to consider the investment – a point we will return to later. The shift is also echoed in the transition from the more temporary and lower cost agency arrangement, which can be terminated at any time with minimal financial penalty to the firm. The final step in this progression to being a multinational enterprise (MNE) is to establish production locations in other countries – either as a regional export centre or to service particular markets that may, for instance, be otherwise inaccessible because of tariff or other barriers.

That description summarises the prevailing view of the path to becoming an international firm and provides a reasonable description of the steps through which Scandinavian MNEs, for example, have progressed (Forsgren, 1990; Johansen and Valhne, 1990). This route from import substitutor, through opportunistic to strategic exporter and thence MNE, is illustrated by the trajectory shown in Figure A1.1. The diagram graphs the relationship between the proportion of Australian production that is exported against the proportion of total sales that is produced overseas.

If this is the dynamic that operates for international firms, then the relevant policy issues centre around efforts either to accelerate the progress of firms along the trajectory, or to increase the proportion of firms moving through critical transition points – for example, from opportunistic to strategic exporter. The Four Tigers, for instance, appear to have collapsed the time scale for firms moving from small to multinational exporter. On the other hand, more German and Japanese firms appear to move from the opportunistic to strategic exporting stage than those in Britain do. It has been suggested that British export performance would be improved if this transition were managed more effectively (Williamson, 1990). However, little in the existing debate about the prospects for

Australia’s international firms even specifies whether these are the levers that policy should manipulate, much less is clear about which approach is being advocated, or any question of a balance between these two policy strategies.

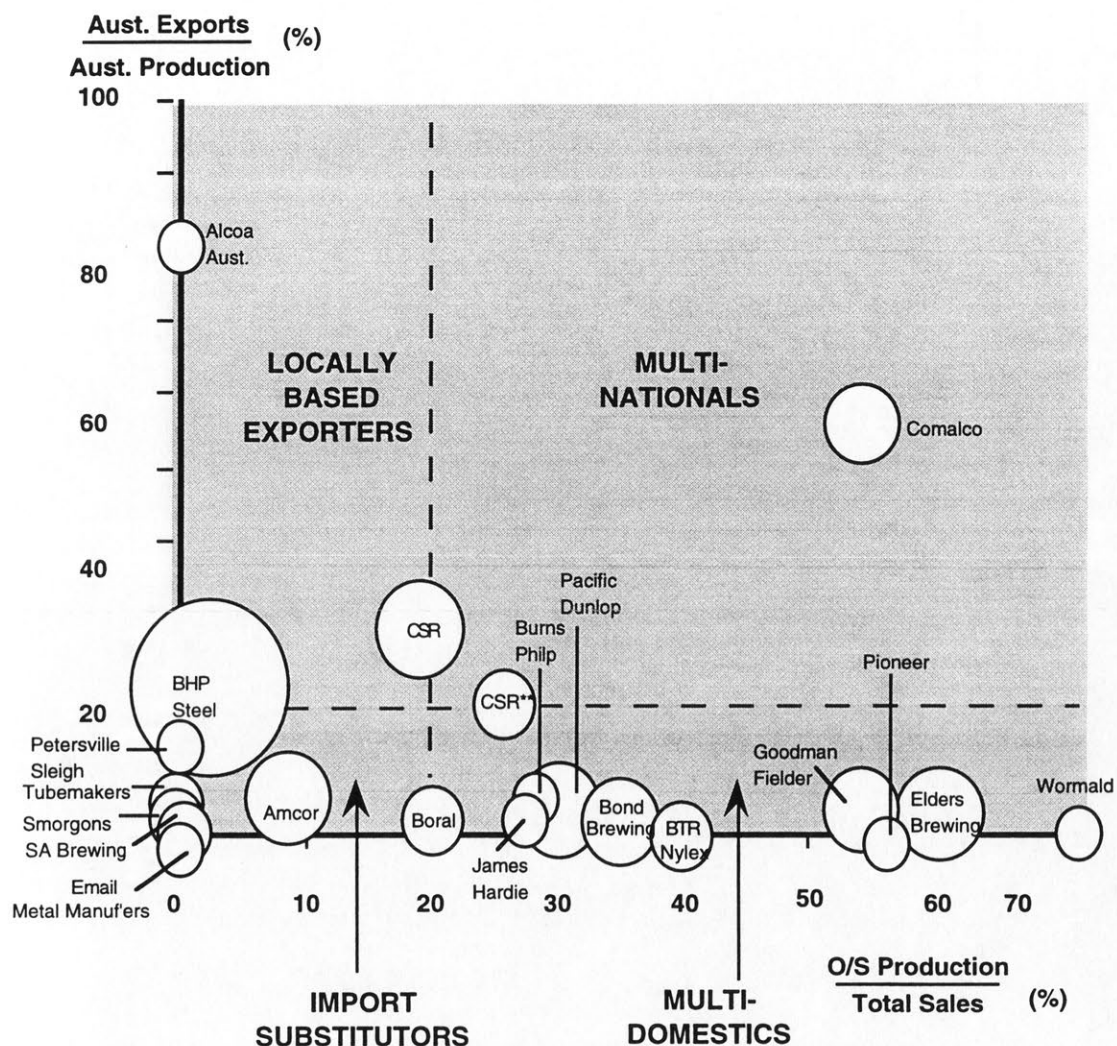
Figure A1.1: Dynamic trajectory of an emergent MNE



A1.2 The Australian picture

When the shape of the agenda itself is not well specified, as in this case, data about actual behaviour is always a useful starting point. A beneficial approach is to consider the “portfolio” of successful Australian international manufacturing firms as a set. These appear in Figure A1.2, from *The Global Challenge*, prepared for the Australian Manufacturing Council by the consulting firm Pappas Carter Evans and Koop (PCEK). The chart reveals a distinctive pattern, and notably, one that differs from the pattern which should result if most firms were following the path presented in Figure A1.1.

Figure A1.2: International exposure of Australia's large locally-based manufacturers*



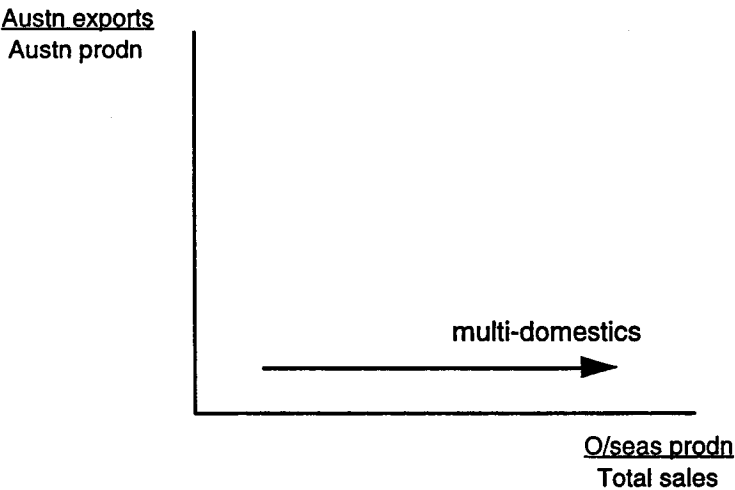
Note: Circle size represents 88/89 sales. * (Sales > \$1b 88/89). ** Building Products division only.
Source: PCEK analysis based on annual reports and interviews.

If Australian firms were typically following the opportunistic to strategic exporter to multinational enterprise route that is assumed to exist in most of the policy debate, we would expect to find a cluster of manufacturers in the upper right hand “multinational” quadrant. Figure A1.2, however, shows that this sector is nearly empty. The conclusion usually drawn is that our firms do not progress along the assumed path because they are not competitive. However, we need first to understand the origins of this apparently unusual configuration, rather than leap to the assumption that Australian manufacturing firms are not competitive.

This involves stepping back from much of the public debate about the international performance of Australian firms, which is couched mainly in terms of their lack of competitiveness. The rhetoric and policy effort usually zero in on the contributing factors and, in particular, impediments to inefficiency – protection, restrictive work practices, inappropriate culture and mindset, and so on. In *The Global Challenge*, however, PCEK found that Australia does have successful international firms – but the paradox is that they don’t export, as shown in Figure A1.2. Indeed, the most striking feature of the graph is the preponderance of multi-domestics – international firms that produce in their overseas markets rather than export from their domestic base – with virtually none of the exporting MNEs that are so widely assumed to be “normal”. In this, the national portfolio stands apart from those of other industrialised economies, which would include a more balanced mix of MNEs and multi-domestics.

Stylistically, this set of Australia’s international firms can be represented as a group which is moving along the horizontal axis, as shown in Figure A1.3.

Figure A1.3: Dynamic of Australian international manufacturing firms



As they become increasingly successful, they continue to expand and penetrate foreign markets by overseas production. They have been dubbed “multi-domestics” because of this propensity to produce in multiple domestic markets.

It would appear then, from the data on Australian firms, that the assumed pattern of internationalisation does not prevail. There are not large numbers of opportunistic exporters that should become strategic ones, as Figure A1.1 suggests. On the contrary, the large and successful international manufacturing firms that do exist follow a different stylised trajectory, as presented above in Figure A1.3.

This paradox of successful large international firms which do not export was the stimulus for a more recent report to the Australian Manufacturing Council (Yetton, Davis and Swan, 1992) which examines whether Australia is different in this respect, and to what extent the existing Australian firms meet the need to improve the terms of trade. The discussion below draws on the findings of that report.

A1.3 Is Australia different?

The absence of large exporting multinationals is often assumed to be evidence of the lack of competitiveness of Australian manufacturing. This is not necessarily the case, however. Analysis undertaken in the recent *Going International* report strongly suggests that tradeability explains the pattern. So, although in aggregate the national portfolio of large international firms is unusual, at the individual level the firms are typical of the competitive international firms in their industries.

One of the choices facing a firm that has reached a certain size and decided, for a variety of related reasons, to expand into overseas markets, is whether to export from the domestic base or locate production in the overseas market. Analysis of the behaviour of firms from other industrialised economies indicates that the degree to which a product is internationally tradeable is the strongest determinant in this decision.

The link between tradeability and export behaviour becomes clearer if tradeability of goods is conceptualised as a matter of degree, rather than the usual dichotomy between the traded and non-traded goods sectors. Industries range across a broad spectrum in the extent to which they are traded, from highly traded goods, such as aircraft and consumer

electronics, to those which are lightly, if at all, traded across borders. These would include building products and beverages, for example – items which are typically low in value and expensive to ship because of their weight, bulk, non-standard shape, or non-durability. Such goods are more typically produced close to the location where they are consumed. The ideal approach to constructing a measure of tradeability would involve dividing total exports from every country by total global production of that product. Since this data is effectively not obtainable, *Going International* used a more limited proxy measure, relying on the imports and exports of several major economies.

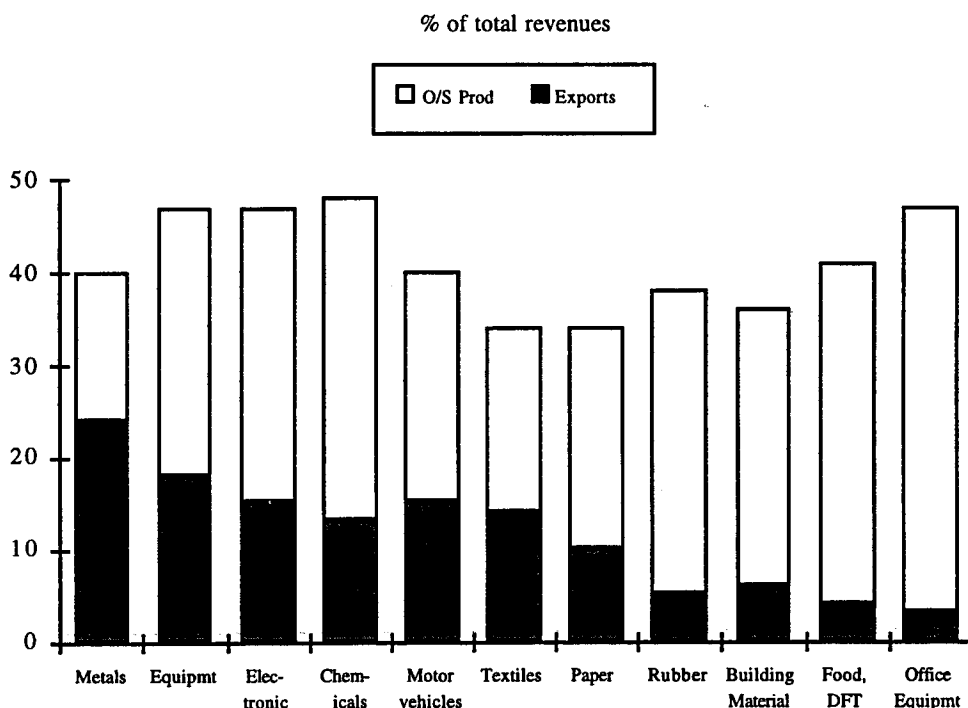
The results confirm that some industry sectors rank as highly tradeable: eg. consumer electronics, computers, aircraft, semiconductors and aluminium. In many cases, these are elaborately transformed manufactures (ETMs), and a significant proportion of world trade is intra-firm. At the other end of the spectrum are most building materials, food, drink, tobacco, packaging and printing.

Since industries differ in the degree to which they are internationally tradeable, one would expect that exports would vary in relevance as a measure of international competitiveness, as tradeability shifts from high to low. In general, successful global firms in the less traded industries are unlikely to export significantly, simply because the nature of the product limits the option to trade across large distances. Their expansion offshore is more likely to take the form of overseas production, often with as many production locations as they have local markets. Even within one country, firms in these industries may have several production sites, each serving a fairly narrowly bound geographically defined market. This point is important because the notion that exports are somehow the only measure of international competitiveness is strongly, if only implicitly, embedded in concern with the need for Australian manufacturing to become more competitive. But this assumption is made in the absence of any consideration of how internationally traded the industry is – and therefore how relevant exports are as a measure of performance.

The impact of tradeability, and therefore industry, on export behaviour is confirmed by the report's survey of international research. This indicates that, while multinational enterprises (MNEs) have developed in every major sector of manufacturing, whether international competition takes the form of exporting or overseas production varies across industries and is strongly influenced by the degree of tradeability of the product sectors in which the firm specialises. In other words, all industries have firms that have grown large and become global players, but how those firms compete offshore varies according to the tradeability of the product itself. This can be illustrated using data compiled by Stopford and colleagues in the *World Directory of Multinational Enterprises*. This *Directory*, published first in 1980, is built on detailed estimates of the export and foreign production for each of the 430 major firms covered. Indices of the proportion of total revenues accounted for by sales outside the home country and the proportion of total production located outside the home country can be computed from the *Directory*, by sector. This data is summarised by industry sector in Figure A1.4.

While the industry rankings involve some methodological problems, the findings are fairly robust. First, any such categorisation suffers from its coarseness. Building materials, for example, might include an enormous range from standard house bricks (produced in thousands of plants around the world) to a particular decorative ceramic tile (where a single plant might supply the world market). Nevertheless the approach is indicative of general trends. Second, as direct foreign investment has grown consistently faster than international trade since this data was compiled, foreign revenue can be expected to comprise a growing proportion of total firm revenues in almost every sector. However, the orientation towards exporting or overseas production will continue to reflect the tradeability of products across the spectrum.

Figure A1.4: Parent exports and foreign production as a percentage of total revenues



Source: *Going International: Export Myths and Strategic Realities*, Figure 2.4

The figure suggests, therefore, that sectors on the left are those in which an MNE can compete internationally with significant exports. On the right hand side, by contrast, the firm is more likely to play globally by locating production within other markets. It follows then that using exports as a measure will not capture the performance of all firms as international players.

Turning to Australia's leading manufacturing firms, it becomes apparent that most of those which are large enough to be MNEs operate in industries at the lower traded end of the spectrum. Their products are those where transport costs and technology favour overseas production over exports as the means of expanding internationally. At the same time, MNEs whose home base is overseas (typically Japan, the US or the UK), dominate the highly traded sectors in the Australian economy. This is the case for consumer electronics, motor vehicles, petrochemicals and heavy electrical equipment, for instance.

In sum, we have a world in which few Australian domiciled firms operate in those sectors of the economy that are highly traded, and for which exports would therefore be a measure of international competitiveness. That Australia lacks a significant number of large manufacturing exporters does not, therefore, inexorably lead to the conclusion that our manufacturing industry is not internationally competitive or world class. Rather, it simply reflects that there are few Australian owned firms in the industries that are highly traded internationally. Global performance in the less traded sectors, where Australian owned firms tend to be concentrated, is more appropriately measured by sales from overseas production.

The critical issue here is not that the existing firms are not competitive. Understanding the reason for the non-exporting pattern of our major manufacturing firms then helps to redirect policy attention. Global winners may be either exporters or overseas producers, and that choice is primarily determined by the degree of tradeability of the industry within which they operate. Most importantly, a firm can be highly competitive internationally without being an exporter. Thus, the policy implication that most immediately arises from this finding is the importance of decoupling the implicit or assumed link between exports and international competitiveness.

If tradeability explains the preponderance of multi-domestics, and why the pattern that appears in Figure A1.2 is predictable, the next question is whether the activities of this group of firms will help address the balance of trade issue.

A1.4 Contribution of the multi-domestics

If Australia's international firms take this form, what do they contribute? Specifically, what are the implications for the external account of the fact that most of the existing large international manufacturing firms produce overseas rather than export, for the external account? The key issue in terms of the "national interest" is whether they will "solve" the trade deficit.

Going International (Yetton, Davis and Swan, 1992) concluded that, essentially, the answer is no. Policy makers need to look elsewhere for a solution to that problem. That said, the direct monetary and other contributions made by Australian-domiciled multi-domestics are not trivial. As world-class competitors, these firms make a significant indirect contribution to the economic and business fabric. They are among the leading carriers of international best practice back to Australia (in those circumstances where they are not themselves the world leader, as a number are). In addition, as headquarters of international firms, they play the role of leading-edge user or demanding customer for other firms, in areas that span capital equipment, components, research and important service industries. A global headquarters, for example, has more extensive and demanding legal, accounting, tax and audit requirements than a subsidiary of a foreign MNE does. Therefore the stimulus that these organisations exert on linked manufacturing and service firms makes a significant if less direct or quantifiable contribution.

The direct contribution they make to the external account is more difficult to quantify than for exporters. While the classic multi-domestic does not export in the conventional sense, it does export managerial expertise in the form of management processes and/or proprietary technology. These are effectively invisible exports and can be modelled as such to estimate their value. The additional issue of timing and form of payments arises in this context, since the flow of funds from invisible exports is not as straightforward as with conventional visible exports. It is also important to note that direct comparisons between visible and invisible export revenues are not altogether appropriate in terms of their impact on our living standards. An invisible export dollar contributes more to living standards than the equivalent visible export revenue. Visible exports have a significant import content which would need to be factored out to make the comparison valid, since invisible exports only involve exploiting the managerial expertise, that already exists through overseas investment.

Nevertheless, the modelling of the value to the external account of earnings from the export of this managerial expertise in the *Going International* report suggests the annual

contribution of invisible exports will be around \$1.5 billion within ten years' time. That will not make a significant contribution to the external account, in comparison with the current account deficit, although the figure is substantial in itself. This estimate of earnings assumes that the basic pattern of activities remains constant until the end of the decade. In particular, it does not anticipate that firms now currently investing overseas will later invest in Australian production capacity and export from Australia.

In estimating the value of invisible exports, account was taken of the size of the investment and the return on that investment. Historical data on actual investment levels were used as a basis for projecting to the end of the nineties, assuming a modest growth for some years followed by a levelling off. Under this scenario, total overseas direct investment would reach around \$100 billion by 1998/99. The same approach for manufacturing direct investment overseas yields an estimate of around \$22 billion by 1998/99. These figures may be conservative, since the pattern of internationalisation for smaller countries shows that there are few limits to the growth of that process once it begins. Growth in investment levels may not taper off over time.

The multi-domestics are assumed to be using their unique available organisational capital, in the form of management processes and proprietary technology, to win economic rents. They must reasonably expect to earn an average rate of return on capital that is higher than the opportunity cost of capital. This margin was estimated at 1.5%, by comparing the reported returns for direct foreign investment by overseas firms into Australia, and those for Australian firms investing abroad over the same period – 1980/81 to 1988/89. Foreign firms investing in Australia averaged a return of almost 6%, compared with a 7% return to Australian firms from their overseas investments. The observed figure of 6% was used as the base or competitive return, and a margin of 1.5% was assumed. In addition to these base cases, an optimistic scenario of 3% was valued. A pessimistic scenario, assuming no economic rents would be generated yields no invisible exports at all. The findings are set out in Tables A1.1 and A1.2.

Although these estimates are based on some comparatively crude assumptions, and the projections are highly uncertain, the major finding that the direct monetary return from these firms (between \$1.5 and \$3 billion by the year 1999) will not make a major impact on the external account remains valid. Even if the estimates are wrong by a factor of ten, the figures remain small relative to the 1990 deficit.

Table A1.1: Investment scenarios: Total direct investment overseas

Invisible Exports (1991 dollars)

Total Australian direct investment abroad

1981	\$ 9 billion	
1991	\$ 56 billion	Competitive return 6%
1999	\$ 99 billion (base case)	

Invisible exports

Base case 1.5% excess return

1991	\$ 840 million p.a.
1999	\$ 1,485 million p.a.

Optimistic case 3% excess return

1991	\$ 1,680 million p.a.
1999	\$ 2,970 million p.a.

Pessimistic case \$ 0 0% excess return

Source: *Going International: Export Myths and Strategic Realities*, Table 3.1

Table A1.2: Investment scenarios: Total direct investment overseas

Invisible Exports (1991 dollars)

Australian direct manufacturing investment abroad

1981	\$ 3.9 billion	
1991	\$ 12.3 billion	Competitive return 6%
1999	\$ 21.8 billion (base case)	

Invisible exports

Base case 1.5% excess return

1991	\$ 160 million p.a.
1999	\$ 327 million p.a.

Optimistic case 3% excess return

1991	\$ 370 million p.a.
1999	\$ 653 million p.a.

Pessimistic case \$ 0 0% excess return

Source: *Going International: Export Myths and Strategic Realities*, Table 3.2

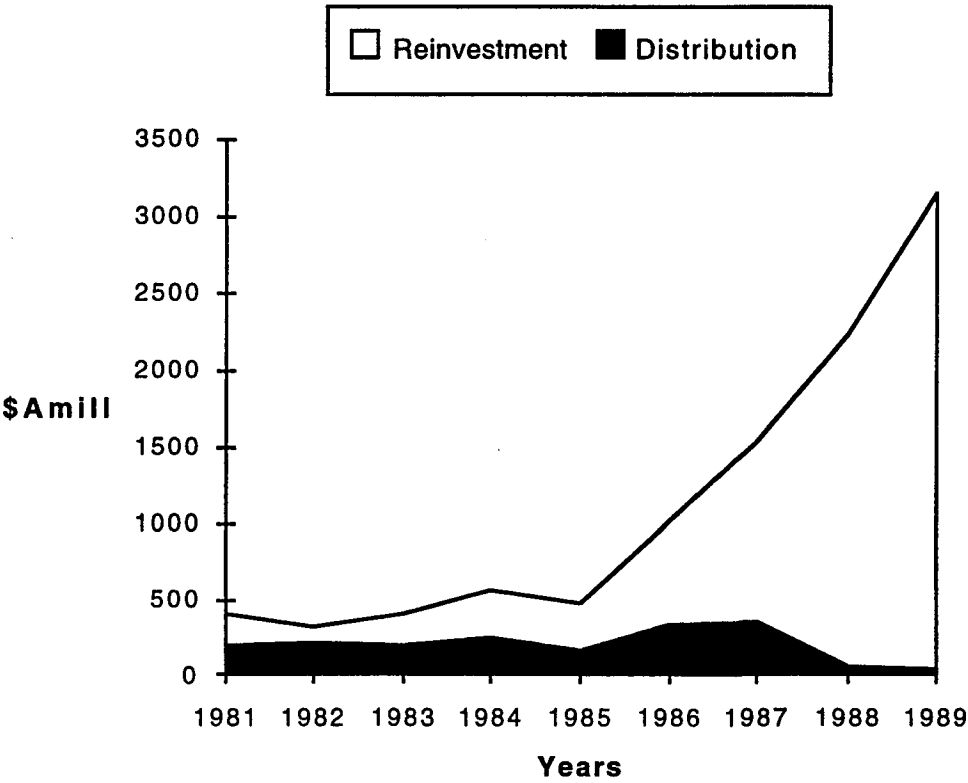
As we foreshadowed above, how and when this value is realised is also less straightforward than for visible export revenues. To address this, the report takes as a starting point a model that assumes that Australia's level of savings remains unchanged, and that therefore any additional investment overseas by a multi-domestic would be funded by overseas borrowings or capital raisings. The premium that flows from the firm's unique managerial expertise would therefore be capitalised into the share value. If debt funding is used, the normal return would be applied to pay the overseas bond holders. Nor is there an immediate impact on Australia's capital account if the premium return on the overseas investment is reinvested. The gain is postponed by reinvestment, until such time as the income is repatriated, when it shows up as a dividend inflow and Australia receives the benefit of increased imports. If the firm chooses to sell some of the increased equity value to an overseas portfolio manager, instead of debt financing, then there is a gain to the capital account in the form of a capital inflow. In turn, there can be a matching increase in the trade deficit as we gain the benefits of increased imports.

Away from the macro perspective, at the level of the firm, the range of options for repatriating overseas earnings is wide. It is worth noting, however, the evidence that companies are generally not using the returns on overseas investment to make dividend payments back to Australia. This is clear from Figure A1.5, which compares reinvested earnings with dividend distribution from Australia's direct foreign investment abroad since 1981. The trend towards reinvestment and almost complete cessation of dividend distribution of earnings from investment abroad is strong and dramatic. The change coincides with the introduction of full dividend imputation for company earnings on which Australian tax is payable. Since overseas earnings attract foreign company tax, they do not qualify for franking credits.

The full implications of this trend for availability of funds for investment in Australia have not yet emerged. But some firms have found that, while the dividend level in Australia is affected by the level of earnings from overseas investment, the funds available for dividend distribution are limited to returns generated in Australia. If, for instance, the

return on investment offshore is higher than that in Australia, then the offshore yield will increase the dividend level, but dividends are paid only out of the lower retained earnings generated in Australia. In a sense, this depletes (or starves, as one CEO put it) the funds available for reinvestment in Australia.

Figure A1.5: Disbursement of earnings from direct investment abroad



Source: *Going International: Export Myths and Strategic Realities*, Figure 3.5

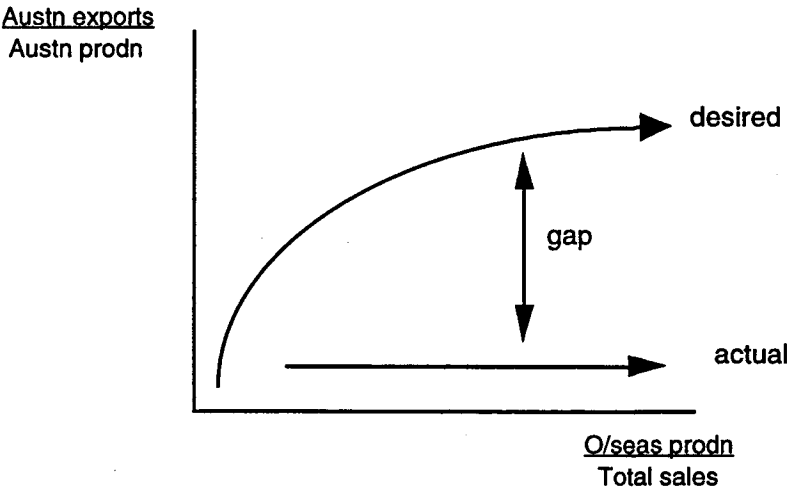
In summary then, Australia’s existing large internationally competitive manufacturing firms will not generate sufficient revenue through invisible exports to make a significant impact on the external account. At the same time, their indirect contribution to the economy as headquarters of international firms is of an order that makes the issue of their domicile non-trivial – although some would argue that they are, at best, irrelevant to the current economic concerns since they are never more than neutral in terms of job creation in Australia. However, if capturing the economic benefits that exports generate is a primary concern, then multi-domestics are not a substitute for exporting MNEs, no matter

how successful and large they are or become, while they continue to pursue a multi-domestic strategy. And that strategy remains the optimal way for them to exploit their existing distinctive competitive advantage. That would only change if they were to change industry.

A1.5 Changing the pattern

So then, the data on existing firms shows that almost all of the successful international Australian manufacturing firms are multi-domestics and that the contribution this group makes will not “solve” the trade deficit, however significant it is in other ways. One way of describing the combination of these two findings is that the gap between the actual and desired configuration of firms generates an effective balance of payments gap for manufacturing, as shown in Figure A1.6.

Figure A1.6: Balance of payments gap for manufacturing

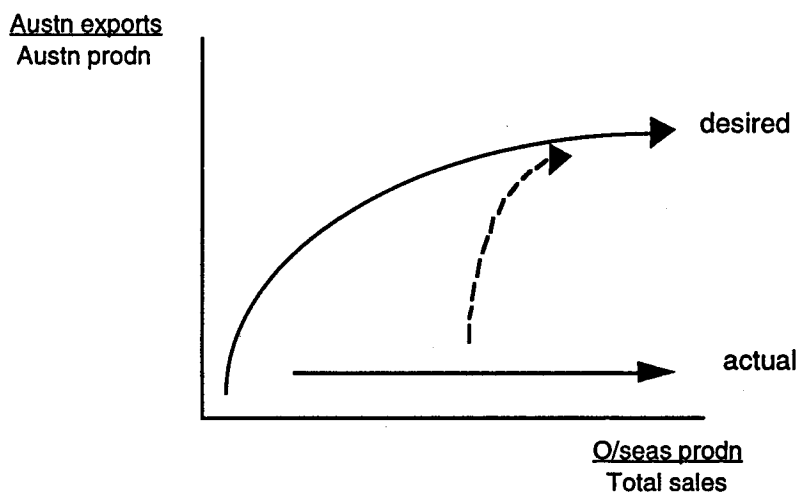


The question then becomes whether the multi-domestics will have a role to play in closing that gap – in effect by moving up from the horizontal axis, as shown below in Figure A1.7, to become exporting multinationals.

The “Third Wave” hypothesis, that current investment in overseas production and distribution assets is the precursor to expanded domestic production for export, is an argument for this. However there is little evidence that firms use their early overseas

expansion to return home and strengthen domestic production capacity. At the same time though, the pattern whereby overseas investment follows, rather than precedes, exports is fairly well established. For example, a product is usually exported until sales levels reach a certain point, at which time production is set up in the overseas market (e.g. Williamson, 1990). In addition, most of the existing manufacturing investment abroad is in products which have low tradeability. As the discussion of this issue above indicates, the nature of the product itself determines that foreign production will continue to be the predominant form of internationalisation in those markets.

Figure A1.7: Third wave



For each of these multi-domestics, the firm’s own unique skill set, which allows it to compete and win effectively in those markets, is also highly specific to the product and the way in which it competes. There is strong evidence that successful firms have achieved a high level of fit between their strategy, structure and management processes which gives them a strong competitive edge (Miles and Snow, 1984). One element of that fit for all the Australian multi-domestics is a particular set of skills related to managing and establishing multiple production units in geographically distant locations (Yetton, 1991). This involves, among other things, a distinctive tight/loose combination of structure and management control systems that allows enough regional autonomy to satisfy local market conditions at the same time as ensuring that cost and technology

issues are standardised across locations. Striking this balance has been the result of enforced learning in the Australian market which is characterised by small centres of population concentration, separated by long distances. To grow to any significant scale in the Australian market a firm has had to learn how to manage these issues effectively.

In effect, these firms have evolved a fit based around a strategic agenda that involves “rolling out “ medium sized plant units, with highly specific management processes, and often proprietary technology, in geographically distant locations. The fit required to manage a large scale plant for export from Australia would demand quite different organisational competences. It is not clear therefore why they would start concentrating their investment in production capacity in Australia and attempt to apply only a subset of their core competences here, either by diversifying or vertically integrating. One additional factor is that these firms have available a large number of investment options from which they select only a limited set. As long as overseas markets continue to offer investments that allow the firms to capitalise on their distinctive competences, they have little need or incentive to take on different types of projects in Australia, from which the returns are less certain. They are more likely to continue growing overseas.

A1.6 Is there a limit to international growth?

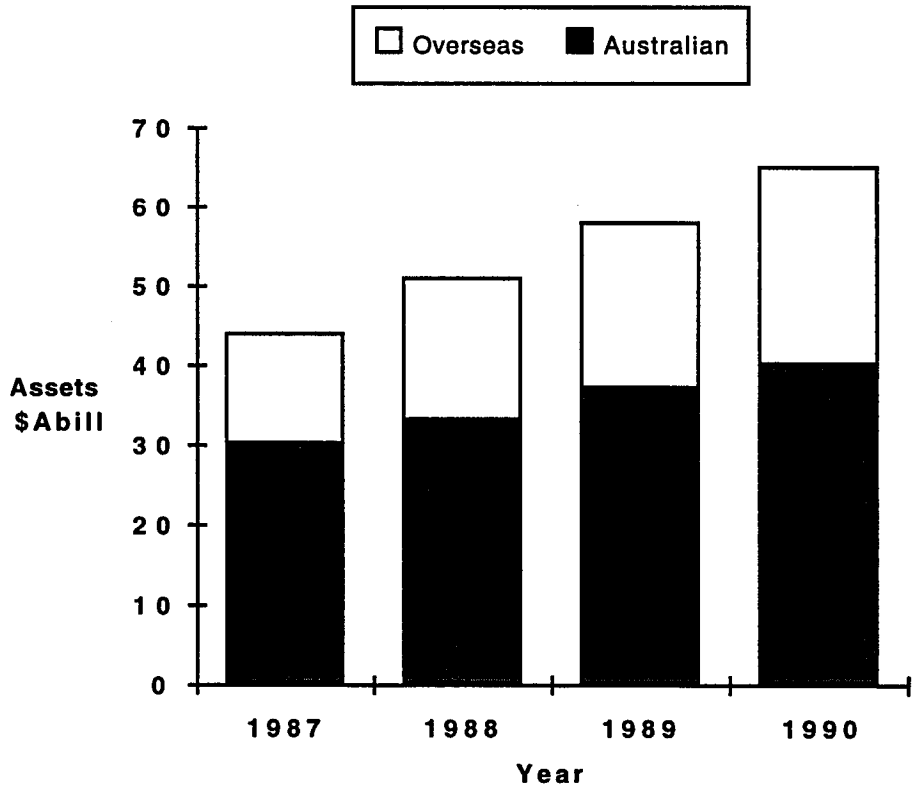
There is, in fact, evidence that Australia’s leading manufacturing firms have been growing overseas assets at a faster rate than those in Australia, at least since 1987. Figure A1.8, based on segment disclosure of information in annual reports, illustrates that the overseas assets of this sample of ten of the top Australian owned manufacturing by market capitalisation have grown at a compound rate of 22% per annum since 1987, when the disclosure requirement was introduced. By comparison, assets within Australia have grown at only 10% per annum over the same period.

This pattern could be expected to continue for several reasons. At the point the multi-domestics go offshore, most of them have exhausted the opportunities for investment in the area of their competitive advantage in Australia. Most of them have strong market

shares in these sectors and, typically, industry rationalisation now limits further growth in the home market. This is particularly the case when the Trade Practices Commission is seen as likely to rely on definitions of the Australian market as the relevant “market” for defining competitive regulation.

At the same time, in the US and Europe, many of these product markets are still fragmented. In the US, for instance, many cement operations are owned by individuals who established the business after the Second World War, are at or nearing retiring age and who find that their children don’t want to follow their footsteps into such an “unglamorous” business. The opportunities for continued growth in the sector of the firms’ distinctive competence therefore lie overseas and not in Australia. It is not surprising that the strategic goals of a number of these firms indicate an even larger proportion of total assets overseas in coming years.

Figure A1.8: Total assets: Top nine multi-domestics



(based on Annual Reports)
Source: *Going International: Export Myths and Strategic Realities*, Figure 2.10.

Evidence elsewhere suggests further that there are no limits to the growth of internationalisation once that process has begun. Consistent time series data for Swedish firms indicate that total foreign production as a proportion of sales abroad rises with the passage of years. Table A1.3 illustrates this pattern, which is consistent with a firm becoming more experienced at operating overseas and with continued growth in increasingly distant markets that are more difficult or expensive to service with exports from the firm's home base.

Table A1.3: Foreign production relative to total sales abroad by Swedish firms (1965-86)

	1965	1970	1974	1978	1986
EEC : original 6	35	42	43	47	46
: later 3	14	15	14	22	24
EFTA	14	14	12	16	18
USA	47	36	37	46	58
Latin America	42	49	46	65	63
All countries	27	29	28	34	38

Source: B. Swedenborg, 1990, *The EC and the locational choice of Swedish multinational companies*, *IUI Working Paper Series*, Industriens Utredningsinstitut, Stockholm.

It is worth noting at this point that, even though Sweden's MNEs include several large exporters (ie. companies whose products are highly traded), increasing proportions of production are located offshore, closer to the largest markets served. Ironically, as their multinational exporters become increasingly successful globally, the direct returns to the Swedish economy are declining (Forsgren, 1990; Bergren, 1991). The final point that is relevant to determining the extent to which Australian manufacturing firms are likely to internationalise is the experience of other small industrialised countries. It confirms the dynamic toward a high degree of internationalisation, as illustrated by Table A1.4.

If the process of internationalisation is most likely to continue inexorably, then the combined effects of dividend imputation and the restrictions on dividend streaming may begin to affect the business and domicile decisions of Australia's international manufacturers. Some may look for alternative ways to obtain a return for their Australian

shareholders in place of earnings from overseas investments. One response, for instance, would be to introduce royalty payments as a mechanism for more explicit charging for

Table A1.4: Estimated degree of internationalisation

No.	Parent	Direct Exports [% of global revenues]	Foreign Affiliates	Total International	Implied Ratio: Parent Exports to Domestic Production
216	U.S.A	3.1	32.6	35.7	5%
12	Canada	14.7	50.6	65.2	30%
51	U.K.	11.8	45.2	57.0	22%
30	Germany	24.5	24.6	49.1	32%
19	France	16.9	35.2	52.1	26%
6	Italy	18.7	24.9	43.6	25%
2	U.K./Neth.	4.8	70.0	74.8	16%
6	Netherlands	17.7	57.7	75.4	42%
4	Belgium	12.5	75.1	87.6	50%
13	Sweden	21.1	51.8	72.9	44%
9	Switzerland	7.5	3.2	90.7	45%
53	Japan	25.3	8.2	33.5	28%

Source: *Going International: Export Myths and Strategic Realities*, Table 2.5.

management services. This approach would allow the income from investments offshore to be earned in Australia, thereby attracting imputation benefits. Alternatively, as the Australian firms become increasingly attractive to foreign investors, particularly portfolio managers, who apply asset allocation rules which indicate approximate holdings for Australian stocks, the firms face the issue of franked dividends, which are valuable to their Australian, but not their foreign, shareholders. In the extreme case, this may result in such an Australian firm deciding to restructure itself into two corporate entities, each held by different investor groups with different tax consequences.

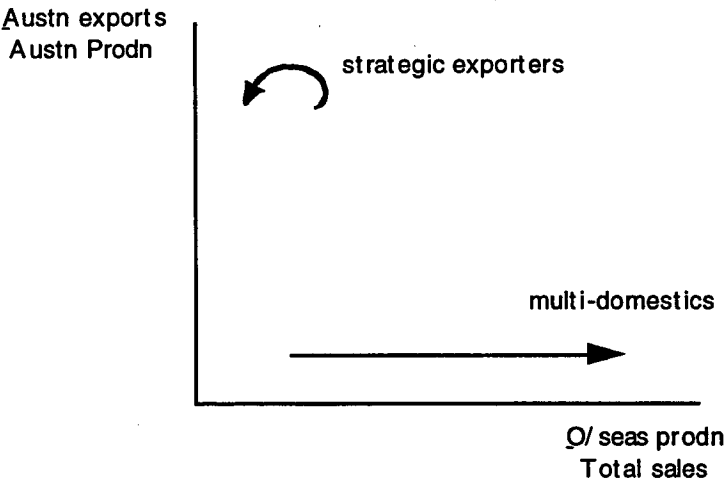
A1.7 Is there a substitute for exporting MNEs?

If using the existing international firms to fill the manufacturing balance of payments gap presented in Figure A1.6 is not workable, and if firms in Australia are not likely to follow the usual development route of an exporting MNE, then the question that arises is whether there is a substitute for MNEs that follow the trajectory in Figure A1.1. This

asks, in effect, whether there is an alternative that, when added to the firms that already exist, will sum to the same economic total for the “national portfolio” that exporting MNEs would yield. More specifically, is there a class of firms which are strategic exporters, but not necessarily Australian-domiciled MNEs, that would contribute in a similar way to the terms of trade? The national portfolio would therefore have a group of multi-domestics and a group of strategic importers, as illustrated in Figure A1.9.

This set of questions rests, in part, on considerations related to the issue of size, which is significant in two respects. The first is simply a question of materiality – unless exporting firms are large, a very large number would be needed to create any significant impact on the external account. The second concerns the nexus between size and being an international firm. Specifically, size appears to be an important first step to succeeding in the global game.

Figure A1.9: The national portfolio

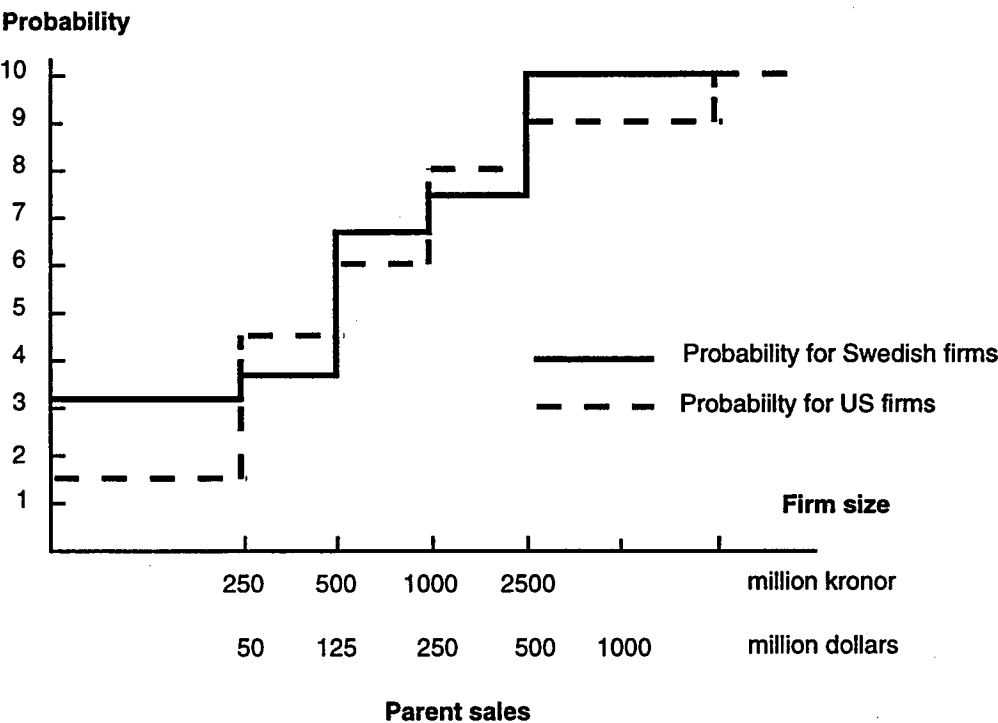


The pattern of internationalisation elsewhere in the world unequivocally demonstrates that size and exporting or overseas production go hand in hand. Each influences the other. Firms that are successful because they have a significant distinctive competence, grow larger and displace other less successful firms in the domestic market. This, in turn, gives them the scale to invest abroad and the incentive to do so, particularly once they have exhausted the opportunities to exploit their distinctive competence in the domestic market.

At the same time, a firm can then only become truly large by expanding overseas, particularly if it is from a small country. This iterative dynamic thus links size and internationalisation firmly together. (Trade practices regulations which define the relevant market in domestic terms can prevent firms from a small country, such as Australia, reaching sufficient scale to be able even to begin to expand internationally.)

A Swedish study using the database of Swedish multinational manufacturing firms compiled by the Industrial Institute for Economic and Social Research (IUI), provides the clearest evidence of this correlation. Swedenborg (1990) shows that the probability of multinational investment (by Swedish firms in Europe and US firms in Canada) is closely related to size (Figure A1.10). Almost all firms beyond the sale of \$1 billion in either domicile have become an MNE.

Figure A1.10: Probability of being a foreign investor for Swedish and US firms of a given class size



Source: B. Swedenborg, 1990

The pattern also holds in the Australian context. Since 1987, firms listed on the Australian Stock Exchange have been required to disclose the geographic distribution of their assets, where these meet the materiality requirement of conventional accounting. Table A1.5

summarises this information for those companies that might be classified as Australian owned manufacturing firms in the top 150 by market capitalisation. The top twenty or so (with at least \$1 billion assets in Australia) disclose significant assets outside Australia (or Australasia), but the proportion drops sharply below that size.¹⁰⁰

**Table A1.5: Australian manufacturing firms:
Geographic locus of assets, 1990**

	Australia	Other
	(\$ billion)	
BHP	13.84	7.79
BTR Nylex	3.51	2.66
Elders IXL	5.94	4.56
CSR	4.15	2.15
Pacific Dunlop	1.81	1.37
Boral	3.06	1.68
Amcor	2.99	0.97
Comalco *	1.93	0.45
Goodman Fielder,	1.35	0.63
Pioneer	3.05	1.61
ICI	2.14	0.62
Burns Philp	0.97	0.92
ANI	0.73	0.52
SA Brewing	1.36	0.25
CC Amatil	1.15	0.42
James Hardie	0.97	1.31
Wormald	0.36	0.33
Email	"operated mainly	within Australia"
Arnotts	"	"
Wesfarmers	"	"
Petersville Sleigh	"	"
Tubemakers	"	"
National Consol.	"	"
Jennings	"	"
Soul Pattison	"	"
Adelaide Brighton	0.23	0.11

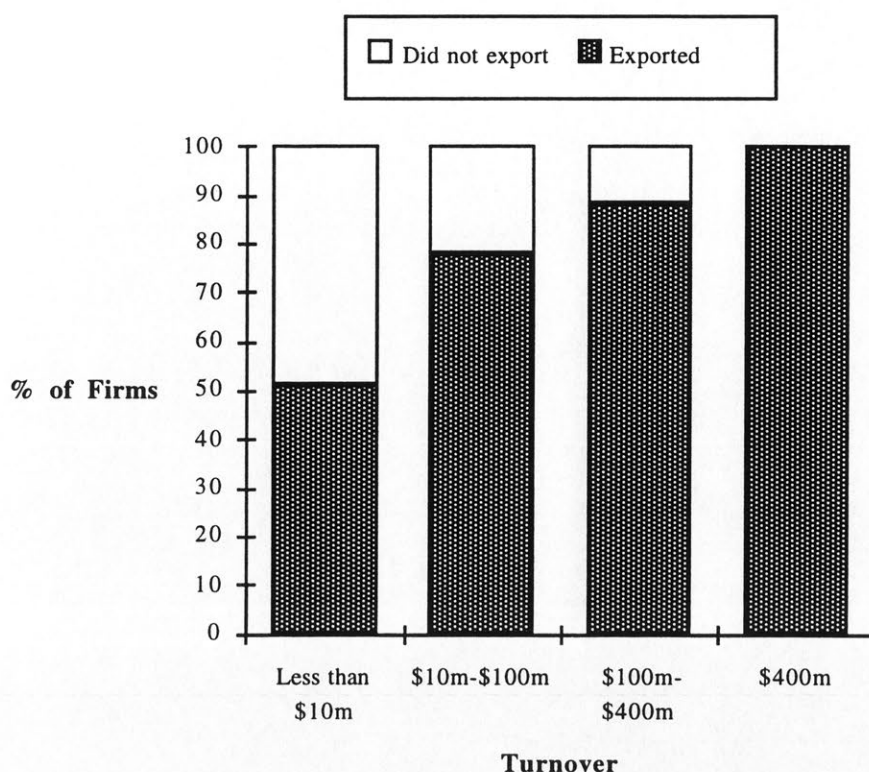
Segment disclosure, Annual Reports * 1989 figures

Source: *Going International: Export Myths and Strategic Realities*, Table 2.5

A study by the Bureau of Industry Economics (1990) also provides evidence for the relationship between size and exports for Australian firms (Figure A1.11). This confirms findings in numerous overseas studies (e.g. Auquier, 1980).

¹⁰⁰ Taken from the most recent annual reports.

Figure A1.11: Relationship between size of Australian manufacturing firms and export



Source: Bureau of Industry Economics, 1990, *Impediments to Manufactured Exports*, Figure 2.

Growing to the scale required for global competition in tradeable industries is, nevertheless, difficult in light of the size of the Australian market, as the historical record demonstrates. The question posed above, and illustrated in Figure A1.9, effectively seeks to side step this problem by asking whether there is a mechanism for starting a strategic exporter that is fully fledged and already large. There are three possible avenues. The first involves a continuation of the existing resource strategy – opening another mine. The second is to import a strategic exporter domiciled elsewhere – an engine plant for example. This is the focus of many of the partnership policies. The third involves capturing the next mobile link in a resource-anchored value chain. If that requires a different distribution system, or technology, perhaps the problem is solved with a joint venture.

The value chain provides a different perspective for examining the third option above – adding value to our natural, and particularly mineral, resources. Many of Australia’s most successful companies are resource-based. Effectively, one end of the value chain is anchored in Australia by the existence of large, high quality resources, available at low cost. There is no question about the quality of Australian firms like CRA in terms of their capacity to establish and build those activities. At the other end, the last stage of the value chain is pulled towards the customer. And the more the customer is powerful (ie. large relative to the producer and to other customers) and has JIT requirements, the more firmly that final stage of processing is anchored in the customer’s home market. These are inevitably the high-volume triad markets. Therefore, this imposes an effective limit on the number of stages in any value chain which can economically be located near the resource (ie. in Australia for many minerals) rather than near the customer (almost certain not to be in Australia).

The value chain for bauxite/alumina provides an example. Conversion of bauxite to alumina typically now occurs close to or at the bauxite source, which reasonably “anchors” that part of the chain in Australia. Downstream fabrication, however, generally takes place close to the customer, partly since ingot is easier to ship because it is less prone to damage than fabricated products and partly in response to reducing inventory levels as a result of JIT systems. Scale requirements for international competitiveness also affect location, in the sense that a state-of-the-art rolling mill will now produce at a level which is more than three times Australian demand. So the aluminium smelter is effectively the only link in the chain which is not necessarily pulled to the market place and is, in a sense, “mobile” and could reasonably be located in Australia, close to the resource. The pulp mill occupies a comparable position in the paper value chain.

The systematic problems involved in the projects that would enable Australia to add value to its substantial natural resources are now so widely recognised as deeply damaging that some action appears inevitable in the short to medium term. By the time the *Sydney Sun-Herald*, a Sunday paper, carries a list of projects that may be candidates for fast-tracking,

as it did recently, it seems reasonable to expect action. Similarly, tax is being widely recognised as a salient issue.

Still, such projects raise difficult questions. Their economic viability typically depends on the pricing and supply of inputs that are controlled by state governments, while the federal government is responsible for many of the national policy concerns such as increased exports and income tax. The states would still bear many of the costs and gain few of the benefits if different pricing conditions were to be imposed.

If one assumes, however, that these issues are resolved, the question remains of which types of firms are likely to make such investments. The two possibilities are foreign multinationals or a large Australian firm which either owns the resource, such as a CRA or MIM, or is a downstream user in the industry, such as Amcor for the pulp mill. To the extent that it will be Australian firms moving up or downstream, the primary consideration is how they would acquire the relevant set of technology and appropriate management processes to undertake the activity successfully. It may be that the activity has to be undertaken by, or in joint venture with, a foreign MNE who either owns the distribution of that product and/or knows the relevant production process.

A1.8 The policy dream

Finally, let us return to the implicit model, which might be called the policy dream. These are the “emergents”, described in *Going International* as the small and growing firms in highly traded goods sectors. Some of them may already have become opportunistic exporters in some degree, and there may even be some industries where there are rival emergent firms, in Porter’s terms. At least, that is the hope. It would then just be a matter of identifying the industries in which these firms appear and actively removing the barriers to their succeeding in moving along the traditional path of growth of the multinational exporter.

But before becoming too lost in this dream, let us consider the case of an Australian firm which has not simply succeeded, but has also become a world leader in an industry in which, in the way we measured it earlier, tradeability was quite high. The firm is Burns Philp and the industry is yeast. The yeast division of Burns Philp has won in an international arena dominated by two major European players (Gistbrocards and Lesaffre) and occupied also by a large US firm (Universal Foods).

Burns Philp competes, and is winning, in the bakers' yeast market as a multi-domestic, with plants that average 1,000 tonnes dry yeast¹⁰¹ annually. By contrast, its two main competitors, Gistbrocards of Holland and Lesaffre of France operate as exporting multinationals, running facilities of at least ten times that size. An additional difference is that Burns Philp produces mainly wet yeast (cream or compressed) in overseas markets, while the two European firms export dry yeast, which is suitable for transport over long distances to overseas markets, because it has the advantage of not requiring refrigeration. These two differences result in at least two competitive advantages for Burns Philp.

The first relates to the price and product characteristics. Dry yeast is more difficult and, therefore, more expensive to produce than the wet varieties, and removing moisture from the product can damage its performance stability. In turn, large scale commercial bakeries, which are the main customers, look increasingly for low variance in their own product quality, so demand highly stable yeast characteristics. The consequence is that imported yeast provides a price and quality umbrella under which local wet yeast manufacturers, such as Burns Philp, whose costs are lower and product quality more stable, can operate.

The second relates to the direction and rate of technological innovation. The yeast culture itself, factory design and equipment, and manufacturing process management all affect a yeast producer's competitive position. Australian geography, with population centres separated by large distances, combined with the difficulty of transporting wet yeast over

¹⁰¹ This is the standardised measure for yeast and refers to the weight that would remain after moisture has been removed. It does not mean that the product itself is dry.

long distances, determined that production at large scale locations was not a viable option for Burns Philp. For their part, however, Gistbrocards and Lesaffre could pursue economies of scale since their domestic markets accessible by refrigerated truck were much denser. “Export” markets into other European countries also offered proximity and density, whereas for Australia, export, as well as domestic markets, involved distances that precluded single large wet yeast production facilities. Not until they had exhausted expansion opportunities in continental Europe – a market immeasurably larger than Australia’s several million, did Gistbrocards and Lesaffre face the issue of how to gain access to more distant markets, beyond the range of refrigerated trucks. At that point, they had already developed dry yeast technology (which Burns Philp did not have at the equivalent stage). Extending the capacity of existing plants to allow for export volumes of dry yeast was the strategy that played most directly to these organisations’ production and distribution strengths.

On the other hand, Burns Philp had focussed its Australian operations on incremental improvements to each stage of the manufacturing process, and had achieved some important production technology innovations. Much of their early development in these areas came from adapting equipment developed for use in other industries, to the yeast production cycle. The only other major world yeast producer to build small scale factories, the US company Universal Foods, concentrated instead on refining existing equipment, and achieved only marginal improvements in operating efficiencies.

As well as focusing production improvement effort away from scale and cost reductions towards process innovations, the Australian geography also had an influence on the rate at which Burns Philp could learn and innovate. Multiple sites provide an opportunity to improve existing production techniques and skills and learn new ones more quickly than one large production facility. Hamel and Prahalad (1989) maintain that it provides “the most defensible competitive advantage of all” to create tomorrow’s competitive advantages more quickly than competitors can mimic the ones you have today.

The potential contribution of multiple sites to a rapid rate of learning was reinforced by management practices that involved rotating state managers every few years, thereby transferring learning across sites; and rewarding the managers on the basis of performance relative to their predecessor's, thereby encouraging incremental and continuous innovation through internal competition.

By the 1980s then, when the yeast division of Burns Philp was looking to expand overseas, it was natural that it would seek to capitalise best on its distinctive competitive advantage by locating small plants in other countries. In many important ways, running San Francisco was just like running Perth.

Burns Philp's international competitors, therefore, had progressed along the traditional trajectory from opportunistic to strategic exporter to exporting multinational. Burns Philp competed differently with them, as a multi-domestic, as a product of its Australian heritage.

A1.9 Geography

The question that arises from the Burns Philp yeast example, therefore, is to what extent geography is an important issue.

What we discovered when we looked at MNEs from the US, Europe and Japan (Vaupel and Curhan, 1973) in the *Going International* study is a strong trend for firms to focus their earliest foreign activity and investment in a "neighbouring" country. The first forays overseas of MNEs from other industrialised countries have been into a medium to large sized foreign market that is both geographically close, and comparable in terms of economic development and social, cultural and legal norms. Countries which are further afield, and more "different", are only included in the international network much later in the process of expanding offshore. So, for example, US firms went first to Canada, then to Europe, and only much later to South America and Asia. European firms expanded

first into other European countries, then to America, while Japanese firms began in Asia, before moving to further distant and more “unusual” markets.

Table A1.6 illustrates this pattern for US-based MNEs, by comparing the geographic distribution of subsidiaries prior to World War I with the spread by the end of 1968. The figures are percentages. It is worth knowing that the actual number of subsidiaries grew dramatically in the intervening period – from 122 in 1914 to 4,820 in 1968. In the early stage of internationalisation, over 85 percent of subsidiaries were in Canada, Europe or the UK. By 1968, the proportion of these three markets had fallen to just over 50 percent. The successful MNEs had “filled in the gaps” with subsidiaries spread to include more distant and “different” markets. This tendency also appears to hold for export expansion of firms (Johanson and Wiedersheim-Paul, 1977).

Table A1.6: Geographic distribution of subsidiaries of US-based MNEs

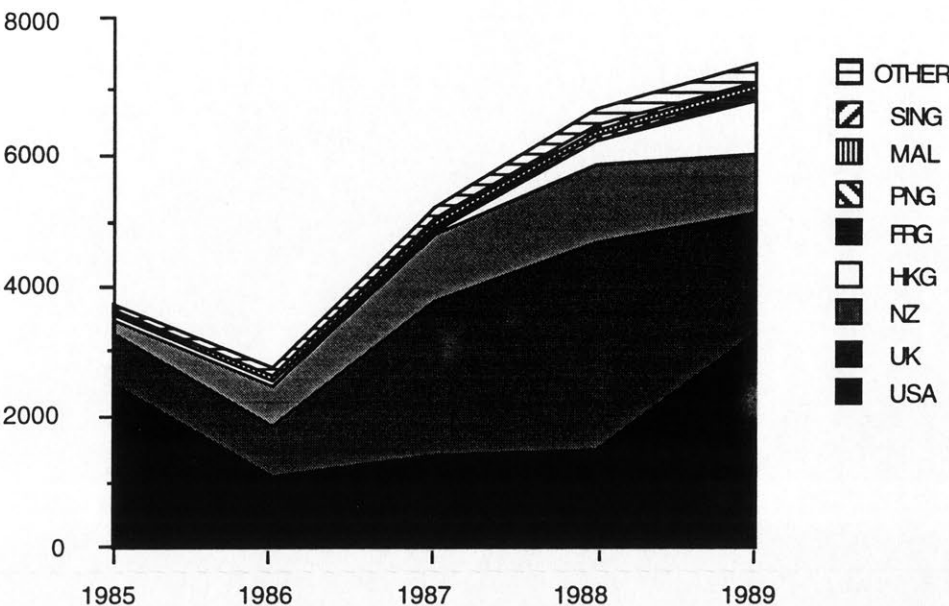
Location of subsidiary	Pre 1914 (%)	In 1968 (%)
Canada	27.0	15.5
Mexico	2.5	6.8
South America	5.7	19.1
U.K.	19.7	10.2
Europe	41.8	29.4
S. Africa, Aust, NZ	2.5	8.9
Asia	0.8	7.5
Africa, Middle East	0.0	2.6

Source: *Going International: Export Myths and Strategic Realities*, Table 2.2

In the context of assessing the importance of geography, the issue is really who your neighbour is. Of course, this question is highly relative. To draw a crude parallel, if you adopt the perspective of a European firm and are based in Melbourne, then Sydney is your neighbour. Within Australia, a company already manages across vast distances before it goes “offshore”, and that move typically involves even larger distances. A European company, however, begins “exporting” to locations which are comparatively close and densely populated. Their first export markets are neither distant nor very different. For their part, however, once they have expanded in the Australian market,

Australian firms appear to act as though the US, UK and New Zealand are “neighbours”, as the data in Figure A1.12 indicates quite dramatically.

Figure A1.12: Australian direct manufacturing investment overseas



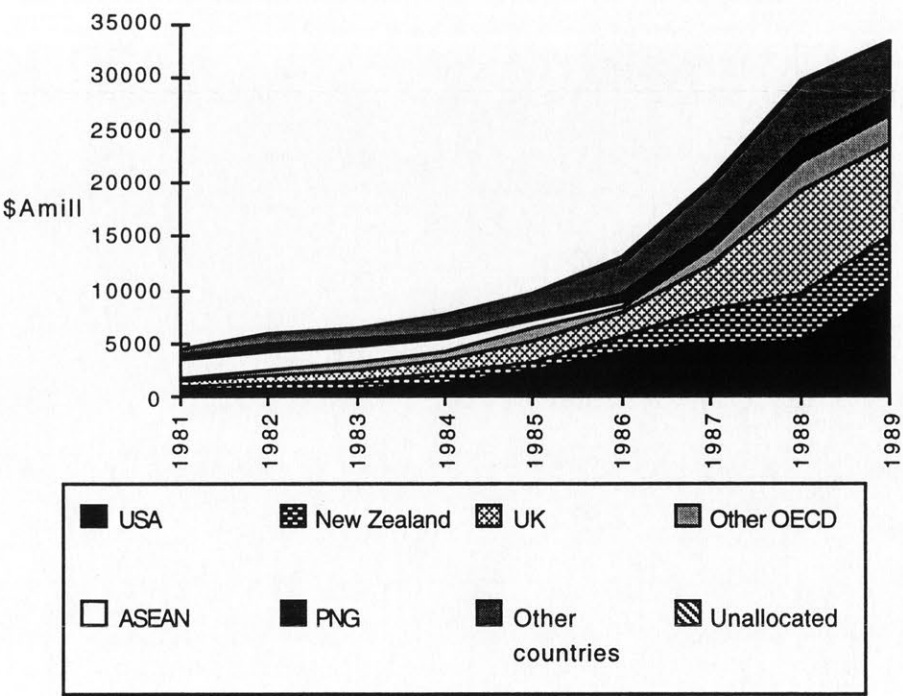
Source: *Going International: Export Myths and Strategic Realities*, Table 2.6

Given the importance of size for becoming an international firm, the geography/neighbours issue, which means that the immediately accessible market is small, carries significant implications for hopes to grow large scale operations in Australia. The aluminium rolling mill provides a case in point. If it were possible, on contracting and input pricing grounds, to locate a rolling mill in Australia, then the current minimum world efficient size for the mill would produce at least three times the capacity of the Australian market. And in most industries, there is no apparent readily accessible market that could absorb the capacity. Therefore, the likelihood that significant global competitors in the highly traded industries can be nurtured from seed, or even seedling in the market that is readily accessible from Australia, is slight.

A1.10 The South East Asian option

There must, however, be a question whether history is a good predictor of the future in relation to South East Asia being part of the readily accessible market for growing Australian firms. Not only are Australian firms choosing to invest elsewhere, but ABS data, summarised in Figure A1.13, also shows that those who did invest there in the 1970s have exited those markets.

Figure A1.13: Australian direct investment



Source: *Going International: Export Myths and Strategic Realities*, Table 2.5

To date, most of the Asian economies have not been neighbours in the sense of a geographically close, medium-to-large market at a comparable stage of economic development and with social, cultural and legal similarities. While many are growing at a rate which suggests the last of these issues will fade, a number of senior managers explicitly pointed out the current mismatch between their firm's area of expertise and local consumption requirements and preferences in South East Asia.

One of the key factors in the investment choice may relate to the active management of risk. The concept of risk used here is different from that used in financial markets and the theory of financial economics, where investors are seen as making choices on a risk-return spectrum. It deals with the risk associated with investments by firms in specific operating assets. The goal is to generate a high return by making maximal use of its (the firm's) distinctive competence, at the same time as limiting the threats to that return. Managers will, therefore, tend to choose investments which entail the best opportunity to reduce the range (or variance) of possible returns.

The concept of "one risk at a time", therefore, plays a significant part in shaping investment decisions. In this context, the very fact of operating internationally represents one new risk for any firm. In a sense, our multi-domestics have already mastered, or reduced the risk of, multiple production locations, as a result of learning to operate in geographically distant state locations. As we noted earlier, opening the San Francisco office is just like opening the Perth office. But becoming accustomed to dealing across currencies and national boundaries, etc, is a new aspect to be managed. We suggest that this constitutes one significant risk in itself. If that overseas operation also takes place in a market with significantly different legal and business practices (for instance, Asia), there is a second element of risk, while language and culture each add another dimension. The organisational capacity of any firm which is new to operating overseas to deal with more than one of these risks is, at best, limited.

In light of these considerations, it is not surprising that most MNEs from industrialised countries began their internationalisation in medium-to-large sized markets which presented fewest of these risks. Fortuitously, most had a geographically contiguous, or at least close, neighbour which "fitted the bill". Australian firms do not.

Understandably, they are exhorted to take advantage of the large and rapidly growing markets to the near north. But, in terms of such investment decisions, managerial practice shows that the critical issue is not just the size of the possible payoff, but also the size of

the potential cost. No matter how temptingly high the potential return is, a senior manager cannot ignore the weight of the risks and a lack of organisational capacity to deal with them now, or how much it might cost the firm while it learns those skills and builds those capacities. It wants to learn as much as it can where it is as easy as possible. This stream of logic is more likely to underlie statements such as “I want to go where I can speak the language and drink the water”, rather than incipient racism or insularity. As international experience and, therefore, organisational capability accumulates, those CEOs become willing to try one more new thing – a different language, a new legal system. And it doesn’t jeopardise the whole investment or, in the extreme, hurt the firm.

Certainly, as shown earlier, the record of Australian direct manufacturing investment overseas indicates an effective preference for the US, UK and New Zealand, all of which entail lower market risk (differences in language, legal systems and behaviour patterns) and control risks (requirements for minority shareholdings or joint venture structures). The notable exceptions, such as BTR Nylex, occurred mainly where an Asian partner actively sought out an Australian company to provide the technology, as a joint venture partner. The local joint venture partner, in effect, provided the organisational capacity to manage the risks related to operating in that new local market. There is little evidence of Australian firms successfully identifying a local joint venture partner in Asia.

Nevertheless, as economies such as Singapore deal increasingly with overseas, and in particular, US, European and UK investors, their own experience as host strips out elements of business risk. For example, contracts are more routinely written in familiar legal codes, the language of business is increasingly English, and so on. At the same time, changing demand characteristics and product markets in the more rapidly growing and industrialising Asian economies are moving closer to those in which our manufacturing firms operate. While this phenomenon is not apparent for all products, there are enough specific areas of opportunity to preclude a blanket assumption that Asia will not be an available market for Australian manufacturing firms. Equally however, nor

is the north an unbounded source of opportunity. Each approach must be specific to the product and the market.

A1.11 Conclusion

The need for focus on specifics and contingent policy is in fact apparent in every aspect of any discussion about the prospects for Australia's international firms. By starting with the evidence about what already exists, we can begin to understand some of the key dynamics that influence the growth of such firms here. This understanding in turn suggests that the assumed growth trajectory, from opportunistic to strategic exporter and thence, multinational, is unlikely to apply, given Australia's geographic and economic characteristics. Fledgling firms in the traded goods areas do not have access to a sufficiently large initial market to develop the scale typically needed to succeed in those industries. Policy debate which proceeds on the basis of this implicit model for growth is therefore unlikely to resolve the issue of increasing export revenues. The critical issue is not a general lack of manufacturing industry competitiveness that prevents the growth of competitive firms.

Rather, the issue is how to ensure exports from Australia increase. Since growing our own new firms to do this is an unlikely option, attention should instead be focused on establishing more firms that are already exporters here. This necessarily entails a focus on the types of firms and types of projects that might be appropriate candidates or vehicles. In a sense, the preoccupation shifts from firms that are Australian owned, to firms that operate in Australia. The key concerns become whether they provide jobs as well as tax and other associated revenue streams. In that world, the Australian government competes actively with other governments, some of whom are already some distance down that particular learning curve. One of the issues then becomes whether you bid away current revenues to buy market share – in this case, to become a participant in the game. A final and perhaps ironic point in this context is that the US and Sweden are both facing a similar issue of domestically domiciled firms which increasingly produce offshore rather

than export from the home base. In this case though, the firms are exporting multinationals, but they are increasingly producing for export in third countries that serve one of the three major regional markets. So by a different route, and at a different stage in their internationalisation process, these nations have arrived at a similar conundrum.

The 443 firms analysed

3M	BHP	Cooper Industries
A. E. Staley	BICC	Corning Glass Works
Abbott Laboratories	BL	Courtaulds
Abitibi-Price	Black and Decker M'fg	CPC International
ACF Industries	Blue Bell	Crane
ACI	Blue Circle Industries	Crown Cork & Seal
ADM	BMW	Crown Zellerbach
AE	BOC Group	Cummins Engine
AEG-Telefunken	Boise Cascade	Dai Nippon Printing
AGA	Borden	Daimler-Benz
Air Products & Chemicals	Borg-Warner	Daishowa Paper M'fg
Akzo	Borthwick	Dalgety
Alcan Aluminium	Bowater	Dana
ALCOA	Bridgestone Tire	Dart & Kraft
Alfa-Laval	Bristol-Myers	Deere
Allegheny International	British Petroleum	Degussa
Allied Corp	British Aerospace	Delta Group
Allied-Lyons	British Steel	Deutsche Babcock
Allis-Chalmers	Brook Bond	Diamond International
Alusuisse	Brown Boveri	Diamond Shamrock
AMAX	Brunswick	Digital Equipment
Amerada Hess	BSN-Gervais-Danone	Dow Chemical
American Brands	Burlington Industries	Dresser Industries
American Can	Burmah Oil	DRG
American Cyanamid	Burroughs	DSM
American Home Products	Cabot	Du Pont de Nemours
American Motors	Cadbury Schweppes	Dunlop
American Standard	Campbell Soup	Eaton
AMF	Campbell Taggart	Electrolux
AMP	Canada Packers	Elf Aquitaine
Anderson Clayton	Canadian Pacific	Eli Lilly
Armco Steel	Canon	Emerson Electric
Armstrong World Industries	Carnation	Emhart
Asahi Chemical Industry	Castle and Cooke	ENI
Asahi Glass	Caterpillar Tractor	Ericsson
ASEA	CBS	Esmark
Ashland Oil	Celanese	Estel
Associated British Foods	Central Soya	Ethyl
Atlantic Richfield	Champion International	Exxon
Atlas Copco	Chrysler	Firestone Tire and Rubber
Avon Products	Ciba-Geigy	Flick
B-A-T Industries	Cities Service	FMC USA
B. F. Goodrich	Clark Equipment	FMC UK
Babcock International	Coastal	Ford Motor
Baker International	Coats Patons	Fruehauf
BASF	Coca-Cola	Fuji Electric
Bass	Colgate-Palmolive	Fujitsu
Baxter Travenol Labs	Colt Industries	Furukawa Electric
Bayer	Combustion Engineering	G. D. Searle
Beatrice Foods	Consolidated Bathurst	GAF
Beecham Group	Consolidated Foods	GEC
Bendix	Continental Gummi-Werke	General Electric
Bertelsmann	Continental Group	General Foods
Bethlehem Steel	Control Data	General Mills

General Motors	Kanebo	National Can
General Signal	Kao	NCR
Genstar	Kawasaki Heavy Industries	Nestlé
Getty Oil	Kawasaki Steel	Nippon Gakki
GHH	Kellogg	Nippon Kokan
Gillette	Kerr-McGee	Nippon Steel
GKN	Kidde	Nippondenso
Glaxo Holdings	Kimberly-Clark	Nissan Motor
Goodyear	Klöckner-Humboldt-Deutz	Nisshin Steel
Gould	Klöckner-Werke	NL Industries
Grand Metropolitan	Kobe Steel	Nokia
Gränges	Kodak	Noranda Mines
Grundig	Komatsu	Norsk Hydro
Guinness	Koppers	Northern Engineering Ind's
Gulf Oil	Krupp	Northern Foods
Gulf + Western industries	Kubota	Northern Telecom
Hanson Trust	Kugelfischer Georg Schäfer	Norton
Harris	Kuraray	Norton Simon
Harsco	L'Air Liquide	Occidental Petroleum
Hawker Siddeley Group	Lafarge Coppée	Ogden
Heinz	Lear Siegler	Oji Paper
Henkel	Levi Strauss	Olin
Hercules	Libby-Owens-Ford	Olivetti
Heublein	Linde	Owens-Corning Fiberglas
Hewlett-Packard	Litton Industries	Owens-Illinois
Hiram Walker Resources	Lone Star Industries	Paccar
Hitachi	Louisiana Land & Explor'n	Parker Hannifin
Hitachi Shipbuilding & Eng	LTV	Pechiney-Ugine-Kuhlmann
Hoechst	Lucas Industries	Pennwalt
Holderbank Financière	MacMillan Bloedel	Pepsi
Honda Motor	Mannesmann	Peugeot-Citröen
Honeywell	Manville Corp.	Pfizer
Hughes Tool	Marmon Group	Philip Morris
Husky Oil	Massey-Ferguson	Philips Gloeilampenfabrieken
IBM	Matsushita Electric Ind'ial	Phillips Petroleum
IC Industries	MCA	Pilkington Brothers
ICI	McGraw-Edison	Pillsbury
ICL	Merck	Pioneer Electronic
IMC	Metal Box	Pitney Bowes
Imetal	Metallgesellschaft	Plessey
IMI	Michelin	Polaroid
Imperial Group	Mitsubishi Chemical Ind's	PPG Industries
Inco	Mitsubishi Electric	Preussag
Ingersoll-Rand	Mitsubishi Heavy Industries	Procter & Gamble
Interlake	Mitsui Miningand Smelting	PWA
International Harvester	Mitsui Toatsu Chemicals	Quaker Oats
International Multifoods	Mobil	R. J. Reynolds Industries
International Paper	Molson	Ralston Purina
Isuzu Motors	Monsanto	Raytheon
ITT	Montedison	RCA
John Brown	Motorola	Reckitt & Colman
Johnson & Johnson	Murphy Oil	Reed International
Johnson Matthey	Nabisco Brands	Renault
K. Wessanen	Nat. Distillers & Chemical	Revlon

Rexnord	Sun	Westinghouse Electric
Reynolds Metals	Superior Oil	Weyerhaeuser
RHM	Suzuki Motor	Wheelabrator-Frye
Rhône-Poulenc	Svenska Cellulosa	Whitbread
Richardson-Vicks	Swedish Match	White Consolidated Ind's
Ricoh	Taiyo Fishery	Whittaker
Rio Tinto Zinc	Takeda Chemical Industries	Williams
RMC Group	Tate & Lyle	Witco Chemical
Robert Bosch	Teijin	Xerox
Roche/Sapac Group	Tenneco	Yamaha Motor
Rockwell International	Texaco	Zenith Radio
Rohm and Haas	Texas Instruments	
Rolls-Royce	Textron	
Rothmans International	Thomas Tilling	
Rowntree Mackintosh	Thomson-Brandt	
Royal Dutch/Shell Group	Thorn-EMI	
S. Pearson	Thyssen	
Saab-Scania	TI Group	
Salzgitter	Time	
Sandoz	Timken	
Sandvik	Toppan Printing	
Sanyo Electric	Toray Industries	
Schering	Toshiba	
Schering Plough	Total	
Schlumberger	Toyo Kogyo	
SCM	Toyo Seikan	
Seagram	Toyobo	
Sekisui Chemical	Toyota Motor	
Sharp	TRW	
Sherwin-Williams	Turner & Newall	
Showa Denko	Ultramar	
Siemens	Unigate	
Signal	Unilever	
Singer	Union Camp	
SKF Group	Union Carbide	
SmithKline Beckman	Union Oil of California	
Snia Viscosa	Uniroyal	
Solvay & Cie	Unitika	
Sperry	United Biscuits	
Squibb	United Brands	
St-Gobain-Pont-à-Mousson	United States Gypsum	
St Regis Paper	United Technologies	
Standard Oil (California)	Upjohn	
Standard Oil (Indiana)	US Industries	
Statsföretag	Valeo	
Stauffer Chemical	Vallourec	
Sterling Drug	Vickers	
Steyr Daimler Puch	Voest-Alpine	
Gebrüder Sulzer	Volkswagenwerk	
Sumitomo Chemical	Volvo	
Sumitomo Electric Ind's	W. R. Grace	
Sumitomo Heavy Industries	Warner Communications	
Sumitomo Metal Mining	Warner-Lambert	
Sumitomo Metal Industries	Wellcome Foundation	

Measurement of variables

A3.1 Rules for estimating foreign production and domestic export ratios

The 500 MNCs in Table A (Stopford and Dunning, 1983) are divided into seven subsets, as follows.

- 1) The first subset comprises a group of 121 firms for whom there is an explicit statement that the figure reported in the “sales of overseas subsidiaries” (o/s sales) column does not include any “direct exports from home country” (direct exports).¹⁰² Accordingly, the figure reported in the o/s sales column is taken to represent foreign production.

These firms represent 24% of the *Directory* firms and together account for \$582,366m in worldwide sales. Firms of all sizes are included in this group: they are drawn from the quartiles¹⁰³ of the 443 analysed firms in the following proportions (qtle 1 - 30%; qtle 2 - 24%; qtle 3 - 20%; qtle 4 - 26%).

- 2) The second subset comprises a group of 28 firms for which “direct exports from home country” are explicitly designated as 0. Accordingly, the figure reported in the o/seas sales column is taken to represent foreign production.¹⁰⁴

These firms represent 6% of the *Directory* firms and together account for \$162,716m in worldwide sales. Firms of all sizes are included in this group: they are drawn from the quartiles of the 500 firms in the following proportions (qtle 1 - 25%; qtle 2 - 14%; qtle 3 - 39%; qtle 4 - 21%).

¹⁰² The explicit indication that sales of overseas subsidiaries did not include any exports was provided by an annotation in the overseas subsidiaries column that the amount reported there “Excludes all exports; any intra-group exports are therefore included with direct exports” (Stopford and Dunning, 1983, p.121).

¹⁰³ Where quartile 1 signifies the smallest and quartile 4 the largest, as measured by total worldwide sales.

¹⁰⁴ Nineteen of these firms had an annotation in the “exports from home country” column, which signified that exports from home base were “Described by company as immaterial or insignificant” (Stopford and Dunning, 1983, p.121).

3) The third subset comprises a group of 21 firms whose sales of overseas subsidiaries are explicitly indicated to include all exports, direct and indirect.¹⁰⁵ Accordingly, the figure reported as direct exports is subtracted from the overseas sales total to give a figure for foreign production.¹⁰⁶

These firms represent 4% of the *Directory* firms) and together accounted for \$113,787m in worldwide sales. They lie in the quartiles of the 443 firms in the following proportions (qtile 1 - 43%; qtile 2 - 19%; qtile 3 - 24%; qtile 4 - 14%).

These three subsets of firms are therefore treated as providing data that allows direct estimates of foreign production figures. Taken together they account for 170 firms (34% of the complete set) and include firms of all sizes (qtile 1 - 31%; qtile 2 - 21%; qtile 3 - 23%; qtile 4 - 24%).

4) The fourth subset, of 60 firms, have a value recorded in both the “overseas subsidiary sales” and “exports from home country” columns, and do not carry an explicit indication about the inclusion or otherwise of exports sales in the o/seas sales figure. Although there are no specific annotations for these entries, Stopford (1980) states in the introduction to the full volume of the original *Directory* that firms report foreign production and home country (often termed “parent company”) exports separately. It is assumed that this is the case for these firms. Accordingly, the figure reported in the sales of overseas subsidiaries column is taken to represent foreign production.

To validate this assumption, Figure A3.1 reports the regression of foreign assets on the assumed foreign production for this set of firms. This regression is compared with that obtained for subset 1 (see Figure A3.2), for which Stopford and Dunning (1983)

¹⁰⁵ This is indicated by an annotation in the sales of overseas subsidiaries column that the amount reported “Includes all exports, direct and intra-group” (Stopford and Dunning, 1983: 121).

¹⁰⁶ This calculation to obtain foreign production figures potentially overstates the level of foreign production, because it is not clear whether the direct exports figure includes both direct and indirect exports. Thus it is not clear whether indirect exports are included in the residual foreign sales figure after the amount in the direct exports column is deducted. For the purpose of analysis here, that residual amount is taken to represent foreign production. It should be noted that the figures reported for VW and BASF suggest potential complications.

give explicit statements that direct and indirect exports from home country are not included in the sales of overseas subsidiaries figure. The comparison shows no significant difference across the two intercepts, indicating that the domestic export estimate for subset 4 is unbiased, and no significant difference across the slopes, indicating that the foreign production estimate for subset 4 is also unbiased.

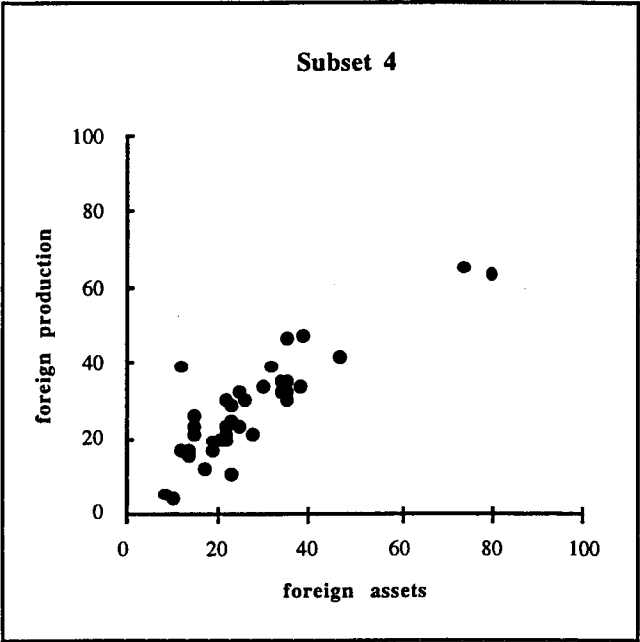
These 60 firms represent 12% of the *Directory* firms and together account for \$326,730m in worldwide sales. They lie in the quartiles of the 443 firms analysed in the following proportions (qtile 1 - 27%; qtile 2 - 25%; qtile 3 - 22%; qtile 4 - 27%) (ie their size characteristics are representative of the whole set).

A total of 230 firms, or 52% of the total set provided in the original data source (Table A, Stopford and Dunning, 1983) are accounted for by these four subsets. For these firms, the figure reported for “Sales of overseas subsidiaries as percentage of worldwide sales” is either accepted as an unbiased estimate of foreign production (subsets 1, 2 and 3), or used as the basis for calculating an unbiased estimate of foreign production (subset 4). Their total worldwide sales account for \$1,185,599m, or 43% of the sales generated by all 500 firms, and 47% of the sales generated by the 443 firms analysed in this study. They are representative of the whole data set in terms of US and non-US firm frequency (48% US; 52% non-US), and in terms of size (qtile 1 - 30%; qtile 2 - 23%; qtile 3 - 23%; qtile 4 - 24%).

The three remaining subsets of firms contain a non-numeric entry (“–”) in either the sales of overseas subsidiaries or direct exports from home country column, or in both columns. For those firms, the following rules are followed in relation to estimating foreign production and domestic exports.

5) The fifth subset of 164 firms have an amount recorded only in the sales of overseas subsidiaries column and a “–” in the column for direct exports as percentage of worldwide sales. It is not possible from this information to discern whether the foreign sales figure includes direct exports or reports only foreign production.

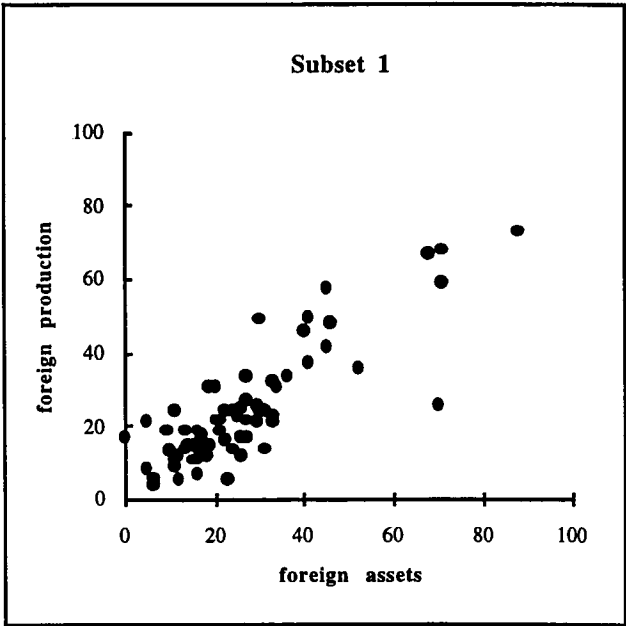
Figure A3.1: Subset 4



$n = 37^*$
 $intercept = 7.12$
 $95\% \text{ confidence interval} : 2.3 - 11.9$
 $slope = .77$
 $95\% \text{ confidence interval} : 0.6 - 0.9$
 $r^2 (adj) = .73$

** No. of firms among the 60 in the subset for which foreign assets are reported*

Figure A3.2: Subset 1

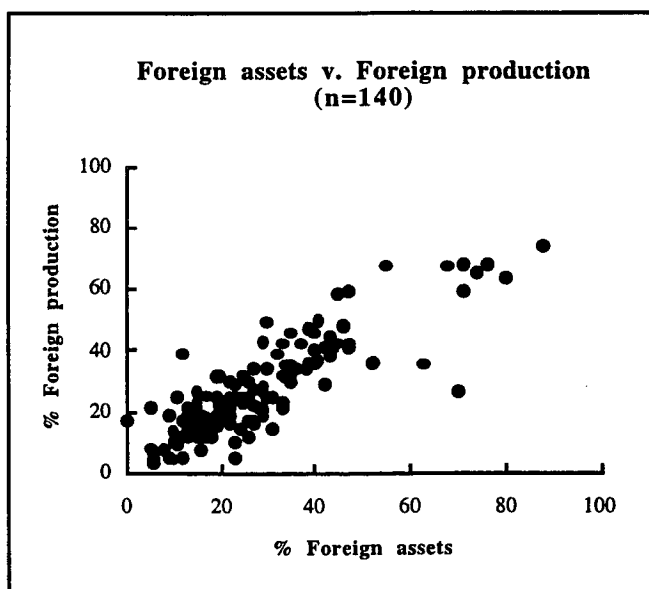


$n = 70^*$
 $intercept = 4.3$
 $95\% \text{ confidence interval} : 0.6 - 8.0$
 $slope = .76$
 $95\% \text{ confidence interval} : 0.6 - 0.9$
 $r^2 (adj) = .70$

** No. of firms among the 121 in the subset for which foreign assets are reported*

For this subset of firms, foreign assets data, where available,¹⁰⁷ are used as a proxy for foreign production.¹⁰⁸ This approach is consistent with practice by other researchers (eg Egelhoff, 1988). A value for direct exports from home base is then calculated by subtracting the estimated foreign production value from the reported total for sales of overseas subsidiaries. The validity of this approach is checked here by regressing foreign assets on foreign production for those firms in subsets 1-4 for which such information can be derived (n=140). These data are plotted in Figure A3.3 below. Foreign assets are a good proxy for foreign production [r^2 (adj) = .73].

Figure A3.3: Subsets 1-4



intercept = 4.79
slope = .79
 r^2 (adj) = .73

¹⁰⁷ Seventeen firms, which reported no data for either foreign assets or foreign employment, were excluded from this fifth subset. Their worldwide sales totalled \$50,114m (2% of total sales of the 500 firms in Stopford and Dunning's (1982) Table A.)

¹⁰⁸ The following decision criteria were used in this process. Where the reported figure for foreign assets or foreign production is $\geq \$5m$ higher than the reported value for sales of overseas subsidiaries (47 firms), or where the figure reported for foreign assets or foreign employment is within $\pm \$5m$ of the reported value for sales of overseas subsidiaries (61 firms), the figure for overseas subsidiaries sales is taken to be the foreign production value.

A foreign production figure was estimated from foreign assets data for 146 firms from this subset¹⁰⁹. They represent 29% of the *Directory* firms and together account for \$1,092,516m in worldwide sales. Firms of all sizes are included in this group: they are drawn from the quartiles of the 443 analysed firms in the following proportions (qtile 1 - 19%; qtile 2 - 26%; qtile 3 - 28%; qtile 4 - 27%).

- 6) A sixth subset of 67 firms comprises those for whom a value is recorded in the exports column, and a “–” appears in the foreign sales column. In those instances, foreign production is assumed to equal 0, or to be immaterial.¹¹⁰ This is consistent with other research findings: the majority of these firms (48) are Japanese, and analysis of aggregated national foreign market servicing behaviour indicates minimal levels of foreign production by Japanese firms¹¹¹ (Dunning, 1993).

This subset of firms represent 13% of the *Directory* firms and together account for \$270,650m in worldwide sales. Firms of all sizes are included in this group: they are drawn from the quartiles of the 443 analysed firms in the following proportions (qtile 1 - 24%; qtile 2 - 32%; qtile 3 - 25%; qtile 4 - 19%).

- 7) The final subset comprises 40 firms which lack entries for both the o/seas sales and direct exports columns, and are accordingly excluded from the set of firms analysed here.

¹⁰⁹ Estimates for 6 of these firms drew on foreign employment data, because foreign assets data were not provided. Regressing reported foreign employment as a % of total employment on foreign production (n=127) yields the following results: intercept = 3.93; slope = .86; r^2 (adj) = .73.

¹¹⁰ Because only four of these firms report a figure for either foreign assets or foreign employment, these measures are not used as a proxy for foreign production in the way they are for the firms in subset 5.

¹¹¹ While Japanese levels of FDI are increasing, the proportion of production performed overseas by large Japanese manufacturing firms was still relatively low at between 8 and 10 per cent in 1990 (Dunning, 1993: 134).

A3.2 Reliability and potential biases

The primary focus of the chapter is to establish that foreign producers constitute a material proportion of the world's largest MNCs, and to test for country and industry effects. A potential threat to the results would exist if the estimates for domestic exports and/or foreign production were biased in such a way as to inflate the proportion of firms falling in the foreign producer category. In particular, a central concern is to ensure that firms which are full MNCs (ie >20 on both x and y axis) are not treated in a way that will erroneously categorise them as foreign producers (ie < 20 on vertical axis and >20 on horizontal axis).

One test of the validity of the estimates of foreign production and domestic exports estimates is to compare the country and industry averages for ratios calculated from them¹¹² with the same ratios reported by Buckley and Pearce (1982).¹¹³ The information these researchers analyse was obtained directly from the 523 large MNCs in their sample: firms were specifically asked to provide these two ratios. In particular, they were explicitly asked to exclude all finished goods imported from the parent for resale from foreign production figures. Thus Buckley and Pearce's (1982) data reliably distinguishes between foreign production and direct exports. Country and industry composition are similar for both sets of firms (see Appendix 4).

The estimates made here from the data provided in Stopford and Dunning (1983) result in similar averages for both ratios, aggregated by both country and industry, to those obtained directly from firms by Buckley and Pearce (1981, p.233). Table A3.1 shows that, by country, the estimated foreign production and export propensity ratios are comparable: correlation for foreign production is $r = .90$, and $r = .93$ for export

¹¹² ie export propensity and multinationality of production.

¹¹³ Their "foreign production ratio" is foreign production as a percentage of total sales, and their "parent export ratio" is parent company (ie domestic) exports divided by parent company (domestic) production.

propensity. Table A3.2 shows comparability by industry: the correlation for foreign production is $r = .80$, and $r = .76$ for export propensity.

Table A3.1: Comparison with Buckley and Pearce (1981) data by country

country	for'n prod%	for'n prod%	xprt prop%	xprt prop%
	based on estimates used here	from Buckley and Pearce's data	based on estimates used here	from Buckley and Pearce's data
Canada	35.6	31.8	37.3	32.7
France	29.6	28.6	31.2	28.4
Germany	19.8	18.5	47.4	38.0
Italy	20.3	14.7	30.1	35.7
Japan	1.1	6.7	26.6	24.6
Netherlands	51.7	29.0	50.7	47.2
Sweden	45.5	33.1	51.4	49.2
Switzerland	73.5	82.9	49.3	61.3
UK	38.3	41.8	18.9	20.2
USA	23.9	29.2	6.7	7.5

Table A3.2: Comparison with Buckley and Pearce (1981) data by country

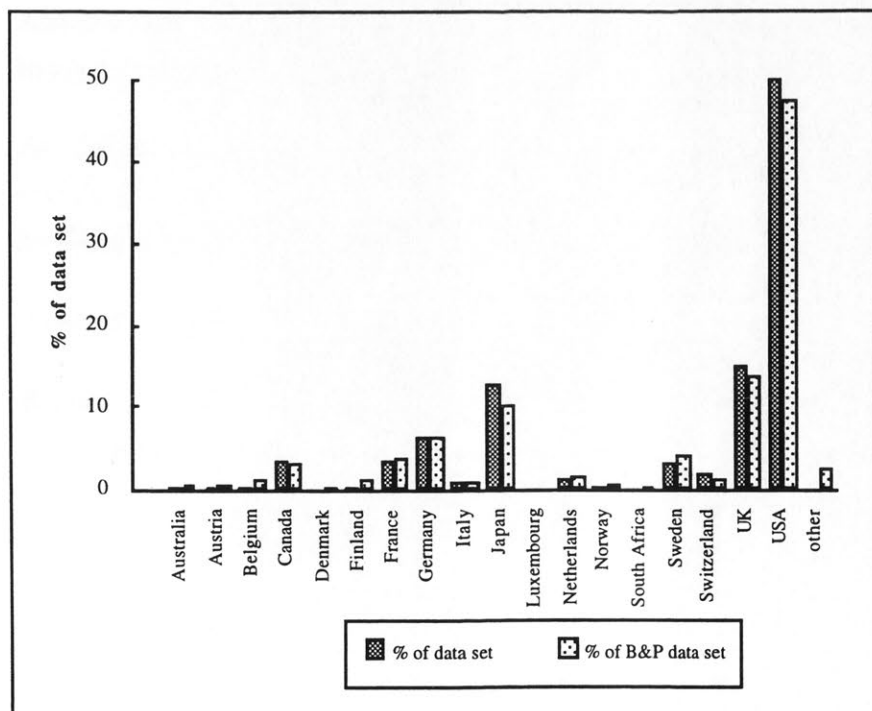
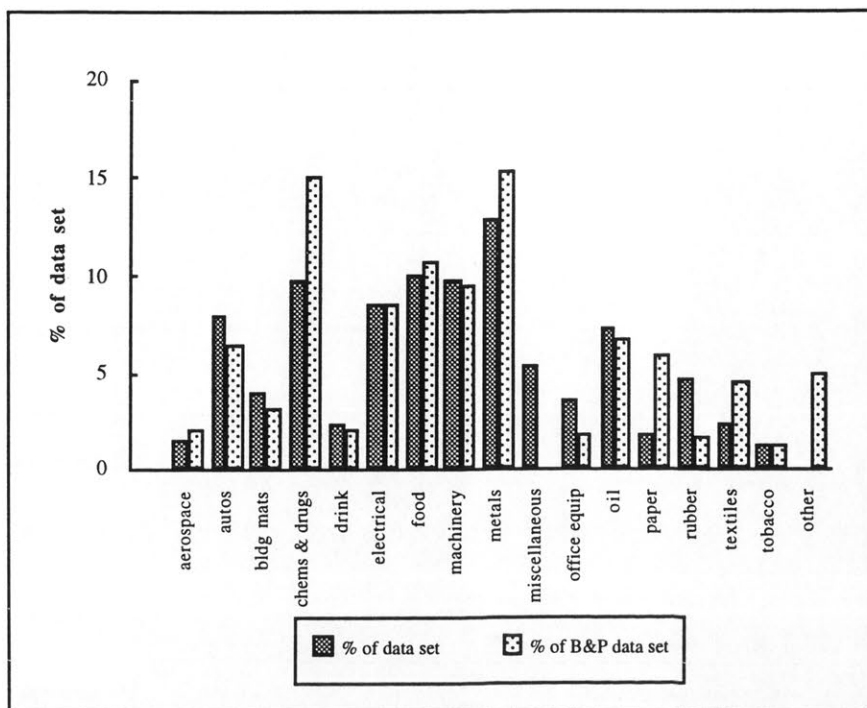
industry	for'n prod%	for'n prod%	xprt prop%	xprt prop%
	based on estimates used here	from Buckley and Pearce's data	based on our estimates	from Buckley and Pearce's data
Aerospace	10.7	8.1	28.4	30.0
Autos	17.6	21.1	33.4	19.8
Building mat's	31.8	31.8	8.5	9.9
Chemicals	25.7	30.8*	19.6	21.2*
Drink	25.7	18.3	11.1	3.7
Drugs	41.0	30.8*	18.9	21.2*
Electrical	24.4	22.0	38.6	22.5
Food	29.8	33.3	4.1	6.1
Machinery [#]	26.6	22.4	26.4	28.0
Metals	19.6	13.1	26.4	24.5
Miscellaneous	17.5	NA	10.2	NA
Office eq'ment	29.0	42.2	20.2	8.2
Oil	29.8	50.5**	5.5	5.4
Paper	18.4	19.7	20.3	15.5
Rubber	26.0	29.3	17.1	5.0
Textiles	17.1	19.2	16.8	13.6
Tobacco	42.7	44.0	19.4	6.2

* This is a combined "chemicals and pharmaceuticals" category for Buckley and Pearce (1981). Combining the chemicals and drugs categories in our data results in an average of 33.3 for foreign production and 19.8 for export propensity.

Taken to be equivalent to Buckley and Dunning's (1981) "industrial and farm equipment" category

** Buckley and Dunning's (1981) category is "petroleum"

Composition of data set analysed here compared with composition of Buckley and Pearce (1983) set, by country and by industry.



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