
Internationalisation of the New Zealand nutraceutical industry¹

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Abstract: A conceptual model is used as the framework for analysis of in-depth case studies conducted on major players in the New Zealand nutraceutical industry. International orientation, domestic market conditions and networks are found to be the most influential factors in expediting international expansion.

Keywords: internationalisation; New Zealand; nutraceuticals.

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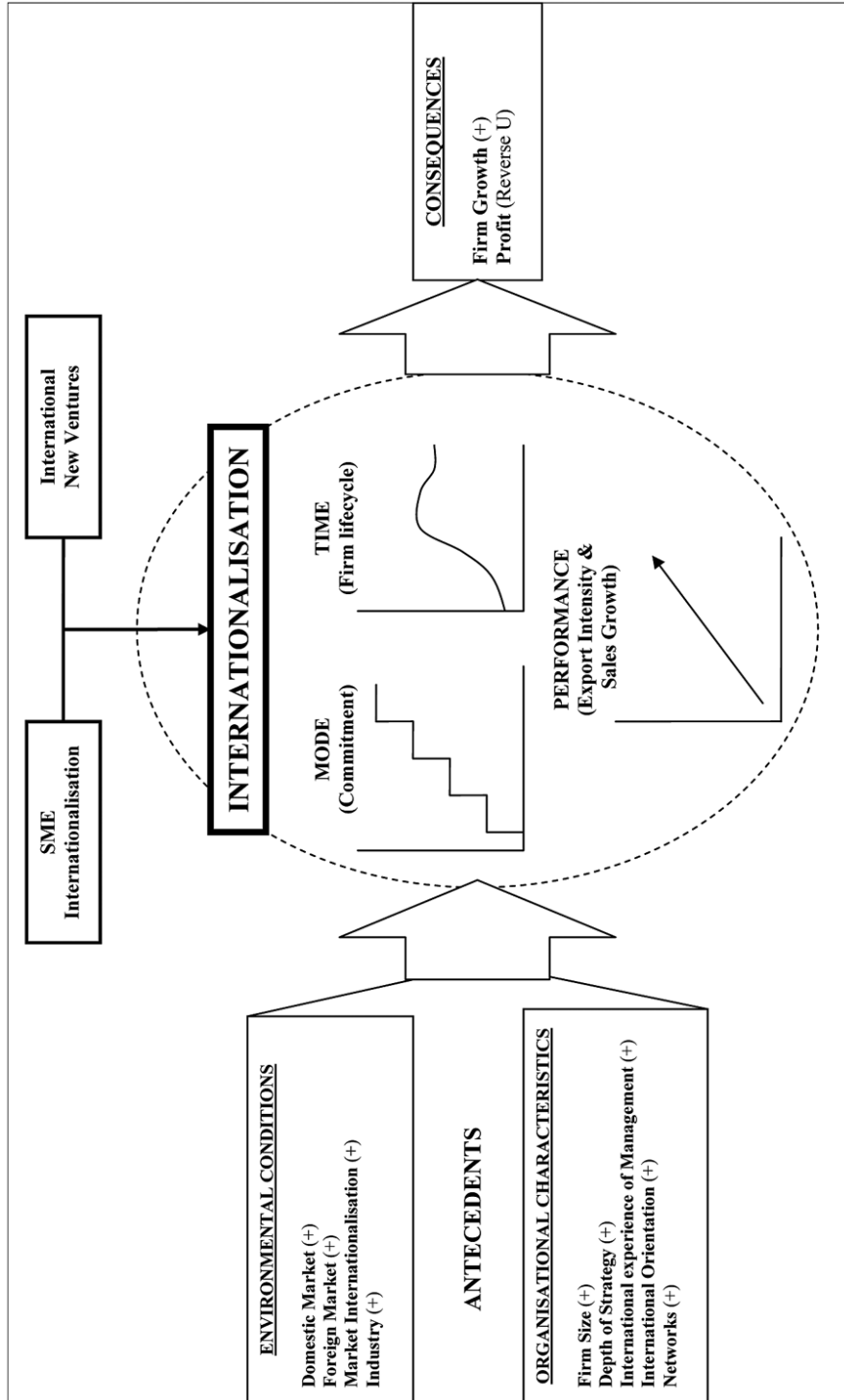
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1 Introduction

Using Welch and Luostarinen's (1988, p.36) definition of internationalisation, 'the process of increasing involvement in international operations', we are interested in understanding the internationalisation of New Zealand's nutraceutical industry, estimated to be worth NZ \$80 million per annum (significant in this country). We shall examine the sector with Antoncic and Hisrich's (2000) framework and build on it, resulting in our own framework as shown in Figure 1.

Figure 1 Internationalisation framework



2 Literature review

Ratten et al. (2007) show that internationalisation may be explained in several different ways. Factors that cause a firm to internationalise may include the competition internationalising, a firm's clients wishing to internationalise and take their business with them (Gray et al., 2000) or unsolicited inquiries from foreign buyers (Karagozoglu and Lindell, 1998). A changing regulatory environment at home may cause a firm to internationalise out of necessity due to an influx of importation (Chetty, 1999) while the equivalent occurrence abroad may make it more conducive for a firm to internationalise. Improved levels of communication, travel and technology have made the international marketplace far more accessible for trade. As a result, even small firms are pressed to compete in internationalisation (Wolff and Pett, 2000).

According to the Uppsala model, internationalisation is 'a process driven by interplay between learning about international operations on the one hand and commitments to international business on the other' (Johanson and Vahlne, 2003, p.89). Aaby and Slater (1989) concluded that the existence of an incremental process of development towards internationalisation was one of few proven conclusions in international marketing research (Moen and Servais, 2002). However, the substantial increases in the speed, quality and efficiency of international communication have greatly reduced the transaction costs of multinational interchange (Porter, 1990). Furthermore, the increasing availability of international financing (Patricof, 1989), human capital, which is more internationally mobile (Johnston, 1991) and the increasing evidence of homogenisation of many markets (Hedlund and Kverneland, 1985) are all allowing greater ease in the conduct of international business. In addition, worldwide trends of reduced government safeguarding, in the form of decreased protective tariffs and import quotas, are enhancing accessibility to numerous domestic markets (Dana et al., 2000). Finally, the rising 'global competition and accelerating technological growth are now forcing firms to internationalise more rapidly than some decades ago' (Johanson and Vahlne, 2003, p.83).

3 Conceptual framework

Early or rapid internationalisation is found in firms categorised as international new ventures (Oviatt and McDougall, 1994). These organisations are in contrast to traditional streams of research that dictate internationalisation to be an incremental process (Johanson and Wiedersheim-Paul, 1975). We expect that the time and mode properties will be influential.

Proposition 1: internationalisation properties (time and mode) will be associated with internationalisation performance.

3.1 Antecedents of internationalisation

3.1.1 Environmental conditions

Antoncic and Hisrich (2000) propose conditions that are crucial antecedents of internationalisation. The first of the environmental conditions concerns the characteristics of the domestic market. Nakos et al. (1998) found that a highly competitive domestic

market might influence internationalisation as firms seek to gain a greater market share offshore. In addition, smaller domestic markets may expedite internationalisation (Madsen and Servais, 1997).

Secondly, the characteristics of foreign markets may influence internationalisation properties and performance. Proximity is an important factor (Madsen, 1989).

Thirdly, Antoncic and Hisrich (2000) expect market internationalisation to impact positively on internationalisation.

Finally, the firm's industry may have an impact on internationalisation. It has been suggested that internationalisation needs to be considered on an industry-by-industry basis, as varying industries differ in export behaviour (Moini, 1995).

Thus, Antoncic and Hisrich (2000) propose the following when considering environmental conditions and internationalisation:

Proposition 2: environmental conditions (characteristics of the domestic market, characteristics of foreign markets, market internationalisation and industry) will be associated with internationalisation properties and performance.

3.1.2 Organisational characteristics

The second class of antecedents identified by Antoncic and Hisrich (2000) is organisational characteristics. Bonaccorsi (1992) identified firm size as an organisational characteristic. Miesenbock's (1988: p.46) empirical studies found that 'the larger the firm is, the easier it starts exporting and runs international business'. Conversely, Cavusgil (1984, p.18) argued that, whilst it was possible that a firm's size did play an introductory role in determining whether export activity would occur for very small firms, 'the relationship between size and export activity remains vague for large companies'. Bonaccorsi (1992) supported this by identifying the following conceptual shortcomings in the current research: small firms often belong to a system of firms, known as networks; therefore they can use external resources.

Also, organisational business strategies, such as product and market differentiation, have been found to have a positive impact on internationalisation (Bloodgood et al., 1997). Furthermore, the movement towards internationalisation is essentially a strategic decision (Agarwal and Ramaswami, 1992). Thus, it is expected that the existence of strategy and implementation procedure will positively affect internationalisation properties and performance.

International orientation of a firm is another characteristic considered by Antoncic and Hisrich (2000) to be influential on internationalisation properties and performance. Dichtl et al. (1990) proposed that the foreign market orientation of a firm and its decision makers was a significant indication of export inclination.

Networks contribute to the success of firms' internationalisation (Chetty and Campbell-Hunt, 2003). Those involved in networks learn about each other's 'needs, capabilities and ways of doing business' (Sadler and Chetty, 2000, p.40) through interaction.

Proposition 3: organisational characteristics are related to internationalisation properties and performance.

3.2 Consequences of internationalisation

Both international new ventures and traditional internationalisation research methods identify that there is an association between internationalisation performance and firm growth (Antoncic and Hisrich, 2000). Whilst research into this relationship is minimal, it is expected that:

Proposition 4: internationalisation performance will be positively associated with firm growth.

Antoncic and Hisrich (2000) found profitability has been criticised as a measure of internationalisation performance. They conclude that this may be due to the non-linearity of this relationship. They draw their proposition from a study of 100 US firms which indicated that, with increasing internationalisation, the relationship with rate of return on assets is first negative, then positive and finally negative.

Proposition 5: the association between internationalisation performance and profitability will be non-linear (reversed-U-shape).

4 Methodology

The use of case study methodology was substantiated by the descriptive and explorative nature of the enquiry (Yin, 1989). The use of multiple case studies, drawn from diverse organisations at varying stages of internationalisation, offered us evidence that is more compelling and robust than the findings from a case study considered independently. Case studies conducted on two influential organisations – the Canterbury Development Corporation (CDC) and *New Zealand Trade and Enterprise* – offer additional insight. Compiling evidence from multiple sources and analysing the information collectively incorporates variety that greatly enhances the case study (Gross et al., 1971).

On initial investigation, it emerged that Canterbury is one of the most progressive regions in the nutraceutical industry in New Zealand. This is due, primarily, to the CDC's formation of a 'nutraceutical cluster' where a number of firms (but not all) are operating in collaboration to amplify their performance and credibility.

The population of firms in the nutraceutical industry in Canterbury was sourced from the Universal Business Directory, New Zealand's largest accurate business database source available. The database segmented firms in the food industry that were located in the Canterbury area and involved in some form of internationalisation. At this stage, a case-by-case analysis was required to determine exactly which firms were involved in the nutraceutical industry.

Due to the growth occurring in the industry, it was difficult to determine precisely how many firms there were in the population of interest. Therefore, the exact number of case studies to be conducted was not decided before beginning the research. Rather, the approach was essentially *grounded* (Strauss and Corbin, 1990), as the research was conducted initially in an exploratory manner. With the emergence of significant issues, the research methodology began to take greater structure in order to investigate the fundamental areas of interest that had arisen. As is common in grounded theory research, the author continued to solicit firms for case study analysis until the marginal return on research was negligible.

The initial point of contact with prospective participant firms was a written invitation requesting participation. This document outlined the purpose and objectives of the research, explained that the data would be treated with the utmost confidentiality and offered participants the results of the study as an incentive to participate. A follow-up telephone call was made within the following fortnight to assess whether the firm fell into the research population. If the firm was willing to take part in the study, an interview appointment was made with the founder or with another key informant at a mutually suitable time. During the period between confirming and conducting the interview, secondary data were collected from company websites, business directories and editorial records. These data were subsequently used in case study formation and analysis to support the findings from the primary data source, the interview.

The interview became less structured as the informants were asked to describe the firm's progression from domestic operations towards internationalisation. In particular, they were asked to describe the firm's rationale behind internationalisation. Further details were subsequently obtained, such as the firm's average domestic sales per annum before internationalisation, as well as the level of education and experience of the decision maker responsible for internationalisation.

The following stage of the interview was designed to establish the firm's international business decisions. The discussion focused on the firm's largest international markets, whether or not demand was solicited from this market, how long the firm had been operating in this market, any trade barriers they had faced, their mode of entry, the size of the market, an estimate of their market share, whether the firm was involved in networks in that climate, marketing decisions made due to that market and, finally, their sales turnover in that foreign market. This process was repeated for the firm's second and third most significant markets.

In the penultimate discussion of the interview, the key informant was queried on subsequent international business decisions. The discussion was directed to what changes would be made, if any, to entry modes, marketing decisions, structure of the firm and staffing size or skill set. In addition, the informants were queried on the principles they used to identify potential markets and whether the firm used any support sources such as *New Zealand Trade and Enterprise* or the Chamber of Commerce. Finally, initial and current internationalisation problems were discussed, with the author probing to find out whether factors such as limited resources, a lack of knowledge or trade barriers were most influential in hindering foreign market entry.

Whilst confidentiality of participating firms' information was guaranteed, it was anticipated that there would be some aspects of the firms' performance that informants might feel uncomfortable discussing. Questions covering these issues were deliberately left until the end of the interview so that the probability of an interview being discontinued was minimised. Such topics included the sales turnover of the firm, their international financial commitment and subsequent profitability. As profitability was expected to be a particularly vulnerable piece of information, informants were not asked to divulge exact values. Instead, they were asked to consider a range of graphs and indicate which path they believed best described their firm's profits following the decision to internationalise. The profitability paths proposed were both positive and negative: logarithmic, exponential and straight-line scenarios, as well as a no change situation. It was anticipated that informants would be more willing to indicate the firm's pattern of profitability rather than to state exact values. In practice, this anticipation proved correct: informants were completely

willing to describe the path their profitability had taken, however, they were less comfortable divulging the sales turnover figures, with some informants refusing to do so. To conclude the interview, the participants were offered the opportunity to share any further information they felt was important in understanding their firm's internationalisation experiences that had not already been discussed.

4.1 Analysis

One of the most challenging aspects of conducting case study research is performing appropriate subsequent analysis (Yin, 1989). Whilst numerical coding and quantitative analysis of case study information has been suggested, this 'approach still fails to address the needs of doing analysis at the level of the whole case' (Yin, 1989, p.106). Furthermore, Yin (1989) emphasises that much of the rich, in-depth qualitative data gathered from interviews are lost in coding. As a result, a three-way approach is suggested for case study analysis:

- pattern matching
- time series analysis
- explanation building.

These analyses are designed to deal with problems of external and internal validity.

Pattern matching is one of the most desirable techniques as it takes the empirical evidence from case study research and compares it with predictions derived from the literature and previous studies. Thus, an extensive literature review concerning trends in internationalisation, the New Zealand economic climate and the relative global environment was compiled for comparison and pattern matching. In particular, the relationships proposed by Antoncic and Hisrich (2000) in their 'integrative conceptual model' were used as a framework for analysis of internationalisation of firms in the New Zealand nutraceutical industry. It was expected that the findings from pattern matching would also compliment time series analysis.

In this research, time series analysis was particularly important in determining the closeness of fit of internationalisation in the New Zealand nutraceutical industry to the incremental stages model (Johanson and Wiedersheim-Paul, 1975) or Oviatt and McDougall's (1994) theory of international new ventures.

5 Findings

The nutraceutical industry's purpose is to derive benefits from natural products that have pharmaceutical-like properties. Nutraceuticals are currently experiencing significant growth in the global marketplace as favouritism has shifted towards all-natural products, reflected especially in the booming sales and popularity of organic produce. Consumer attitudes have changed, with an increased desire to know product ingredients and a decreased popularity for additives, chemicals and unknowns. Furthermore, consumer belief in the nutraceutical category has increased significantly in the recent past. Thus, the growth in production, distribution and sales of nutraceuticals in the past decade has been considerable and an obvious response to burgeoning consumer demand.

5.1 Time of internationalisation

Two dominant streams of research suggest differing opinions on the time of internationalisation. The Uppsala model (Johanson and Wiedersheim-Paul, 1975) suggests that internationalisation is a natural progression for a firm in a relatively mature stage of their life cycle. By contrast, Oviatt and McDougall's (1994) more recent work proposed that there is a new breed of entrepreneurs who are international from inception. Within New Zealand's nutraceutical industry, there appears to be a more dominant, proactive contingent of firms that can be categorised as international new ventures. Entrepreneurial firms A and B, for example, were established with the intent of meeting international demand with New Zealand products. Many firms recognise that in the New Zealand nutraceutical industry, "the size of the domestic market [is] not significant enough to be viable," thus, they are established with the objective of fulfilling international demand.

Firms such as C, traditionally a honey producer that has now re-positioned itself to focus on health and skin care benefits derived from the natural beehive, are more likely to have taken a longer period to internationalise following product diversification. However, upon internationalisation, these firms tend to experience rapid and dedicated growth and behave in a manner that is in keeping with that of an international new venture.

Antonic and Hisrich (2000) propose an association between the time of internationalisation and internationalisation performance. Those firms who were international from inception, true international new ventures, reached internationalisation to the extent that their ratios of international to total sales were between 80 and 100%. B, which was established with the specific purpose of marketing New Zealand nutraceuticals to the international marketplace, has sales that are one hundred percent international. Other firms, such as D, internationalised suddenly. D did so after fourteen years of domestic operation. Currently, their sales are 98% accountable to international business. The firm and management's extreme dedication to internationalisation and subsequent immediate growth indicates that D may, indeed, be a 'late' born global as described by Bell et al. (2003). In contrast, E, a firm that initially operated entirely in the domestic market, gradually engaged in internationalisation after fourteen years. This firm has minimal international sales which account for only 10% of total turnover. This is the exception to the majority of firms that were studied – it appears to fit more closely with the incremental stage models of internationalisation.

5.2 Entry mode

Exporting is the most common means of international business involvement in the New Zealand nutraceutical industry, a finding supported by Leonidou's (1995) observation of export dominance. While firms such as D commenced internationalisation in response to numerous foreign enquiries, others, such as F have always had an international orientation and tend to initiate entry into new markets unsolicited. Although the origins of entry are different, the mechanism is the same: whether or not demand is solicited, exporting is by far the most common manner in which firms engage in internationalisation. It would appear that the underlying rationale for such a phenomenon is the relative newness of the nutraceutical industry in New Zealand. The international new ventures studied were established no earlier than 1998 and the other firms that had internationalised did so no more than fourteen years ago. Thus, the substantial investment necessary in such a

research dependent industry has left firms with little financial capital available for foreign direct investment.

As with the majority of firms, A ‘learned a lot’ from their experiences in international markets and have subsequently adapted a more cautious approach towards financial transactions with foreign firms. G stands out as the exception to export dominance, as they are involved in a joint venture in the Japanese market. G established a joint venture with a Japanese firm in order to successfully enter the market and distribute the ingredient to manufacturers, as they believed this would be the most effective market entry mode.

5.3 Characteristics of the domestic market

There have been a substantial number of nutraceutical firms established in New Zealand in the past decade, thus providing a highly competitive domestic market in a population of relatively small size. New Zealand has a history of large-scale change due to the economic deregulation that occurred in the mid-1980s. Before this, it had been a relatively closed economy, with some of the highest industry tariffs of any OECD country (Chetty and Campbell-Hunt, 2003). Since 1984, liberalisation saw an influx of importers, thus increasing competition in the domestic market considerably (Chetty and Hamilton, 1996). New Zealand firms found that they had to export in order to reach economies of scale and, thus, be competitive in the home market (Chetty, 1999).

In addition to high levels of internal competition, New Zealand has a small market for nutraceuticals. F has always had a strong international orientation, as “it’s [nutraceuticals] such a niche market that demand is very small in New Zealand, so it was natural to move the business offshore”. Nakos et al. (1998) found that a highly competitive domestic market encouraged the internationalisation of small and medium-sized Greek firms, a finding that appears to be consistent with the New Zealand nutraceutical industry.

Antoncic and Hisrich (2000) propose a positive correlation between high levels of immigrants in a domestic market and greater numbers of international start-ups. While the case studies conducted on nutraceutical firms did not encounter any immigrant initiatives, several firms, such as H, were established as the result of New Zealanders living overseas and recognising a gap in the foreign market. These entrepreneurs realised that these needs could be filled by New Zealand products and, subsequently, returned home to bring their ideas to fruition with the aspirations of significant profits.

B pointed out that the New Zealand government is ‘doing nothing to encourage research and the development of intellectual property’, especially in comparison to close neighbour Australia, where research firms are offered tax breaks and the government funds technology parks which aid development. Thus, New Zealand firms are forced to move offshore to find investment partners who will assist in funding research and development. The lack of research and development support offered by the New Zealand government is expediting the internationalisation of New Zealand firms, ultimately to the detriment of New Zealand’s economy.

5.4 Characteristics of the foreign markets

A consensus among all firms identified that the establishment and growth in popularity of the internet and world wide web has had hugely positive spin-offs for New Zealand firms

engaging in internationalisation, particularly in terms of global marketing. The internet has low entry barriers, thus enabling small firms to reach larger markets at lower costs than previously (Hoffman and Novak, 1996; Knight and Cavusgil, 1996; Lituchy and Rail, 2000).

The dominating market for the New Zealand nutraceutical firms studied was the United States. This is New Zealand's second largest export destination overall, just behind Australia which is the dominant export destination. New Zealand firms are attracted to America due to the relative size of the market, potential growth and the burgeoning popularity of nutraceuticals. According to J, the American market is particularly appealing due to its consumers' heightened levels of awareness and acceptance of the nutraceutical industry.

In 1991, Crocombe et al. (1991) suggested that numerous Asian markets were rising in popularity and importance for New Zealand firms. The firms studied in the New Zealand nutraceutical industry indicated that Hong Kong, Singapore, Malaysia and, in particular, Japan, are increasing in popularity as export destinations. *New Zealand Trade and Enterprise* credits this intensification to various efforts by New Zealand delegates to expedite trade in Asia. Robert Muldoon actively encouraged relations with Japanese traders during his period as Prime Minister and the more recent 'Asia 2000' scheme, instigated in 1990, promoted Asia as a dynamic market. A third of G's sales are accountable to the Japanese market, yet other firms have found entry into Asia the most difficult. F found Asia to be "by far the toughest market" due to challenging tariffs and regulations, differing languages and cultural norms. The effect of such discrepancy is seen in their profitability: F sales growth is considerably slower in Japan than in their other foreign markets. Therefore, while several Asian markets are attractive due to their potential, the effects of psychic proximity are problematic.

Notably, Australia was *not* a dominant export market for the New Zealand nutraceutical industry. C speculates that Australian customs are prejudiced, "making it unnecessarily difficult for New Zealand produce to pass through Australian checkpoints".

5.5 *Market internationalisation and industry*

The knowledge-intensive, relatively contemporary nature of the nutraceutical industry suggests that an industry effect is in place, particularly in affecting foreign market choice. Enhanced levels of consumer awareness and acceptance of the nutraceutical industry encourage foreign market entry, while certain regulatory environments on the relatively new nutraceutical industry "can make it a nightmare" and inhibit or discourage entry. Europe, for example, was very attractive to J, however, the regulatory system, where European customs 'can make up their own rules from time to time' inhibits D's growth. In Japan, F has great difficulty passing through customs as the regulatory system does not allow for the inclusion of nutraceuticals. Rather, a firm has to declare their produce in either the food or pharmaceutical categories.

5.6 *Firm size*

Antoncic and Hisrich (2000) proposed that firm size will be positively related to internationalisation, however, findings from the New Zealand nutraceutical industry do not suggest any such relationship. A, a very small, innovative firm with just two

employees turns over in excess of NZ \$4,000,000 per annum, while F has a comparative turnover yet employs twenty staff members. Disparity in firm size appears to reflect the focus of the firm – which varied in the organisations studied from manufacturing to marketing. While F and E produce specialist nutraceuticals, which require labour-intensive production, B and A focus on the marketing and financial aspects of the nutraceutical business. Indeed, A has experienced considerable downsizing since establishment – from twenty-two staff members to just two. This is a reflection of a strategic decision made by management to contract out production, believing it would be more profitable to concentrate on the promotion, pricing and distribution strategy. Thus, the size of a firm appears not to be an indicator of the extent of internationalisation; rather, it is determined by whether the firm's focus is on the manufacturing or marketing aspect of the nutraceutical industry.

5.7 Strategy

Antonic and Hisrich (2000) and Bloodgood et al. (1997) are among those who suggest that product and market differentiation strategies are positively related to internationalisation. D conducts considerable market research as part of an ongoing internationalisation strategy. This involves “keeping a close eye” on the monthly exports of other firms in the New Zealand nutraceutical industry.

Firms such as A, that recognised the need for product adaptation according to a foreign market's demands, achieved increased levels of sales at a faster rate in those markets. Furthermore, firms that tailored their distribution strategies to the traditional channels showed greater understanding of the foreign market and, consequently, tended to achieve greater market penetration. G has an interesting distribution and involvement strategy which varies significantly from market to market. Furthermore, they sell their product in branded ingredient form to some markets and in finished product to others. The rationale behind this is that each country has different needs and distribution channels and G tries to sell in a way that will best fit the country's needs and cultural systems. For example, in Singapore and Thailand G sells the finished product to a medical distributor so that the product is sold on through a doctor. In contrast, in the Canadian market they are in an exclusive relationship with one large company which has the size to give G the distribution and marketing it needs. G's uniquely tailored distribution system is an effective differentiation strategy which appears to be giving them the competitive edge they desire.

5.8 Experience

There was mention of the invaluable knowledge people had gained through living in foreign countries or from working in other internationalised firms. Such international experience has supported their knowledge base and aided, extensively, in international decision-making. The chairman of J spent 35 years living in North America, the last two years of which he extensively researched the nutraceutical market's strengths, weaknesses, opportunities and competition. On returning to New Zealand and exporting to America, he found market entry “relatively easy” due to his understanding of the foreign market. When the current General Manager took over from his father at C, he was able to combine his work experience from an export focused engineering firm and personal familiarity with the family firm to successfully launch the firm in the global marketplace.

5.9 *Orientation*

Without exception, the interviewees who displayed a more enthusiastic manner towards their firm's internationalisation had a higher ratio of international sales. Whilst categorised as a 'late' born global, D is the epitome of extreme dedication and commitment to internationalisation, reflected in a 98% international sales ratio – a complete turnaround from a firm with a previously domestic focus.

The extent of the international orientation of management staff and the firm was also evidenced through indicators such as the B website, which has foreign language translations allowing the website to be read in Japanese and Chinese. A demonstrated a strong international focus as the manager quoted sales figures in US dollars, supporting Thirkell and Dau's (1998) observation that a firm's willingness to quote in other than local currency appears to reflect favourably in better overall performance.

5.10 *Management education*

The education level of a firm's decision-maker appeared to have no effect on the extent of a firm's internationalisation properties and performance. In three instances, namely, D, C and H, the firms are family businesses where knowledge has been passed down from father to son. Tertiary education would not be expected in these cases as knowledge is inherited gradually on a day-to-day basis rather than learnt from an outside institution. Indeed, only one of the managers, from B, had been educated to a tertiary level. It is of note, however, that this manager acknowledged his twenty years industry experience as more valuable than his commerce degree.

5.11 *Networking*

In the New Zealand economic climate, Chetty and Campbell-Hunt (2003) observe that many New Zealand firms are operating in collaboration with others, maximising the aid of shared resources and capabilities. For a country as small and isolated as New Zealand, internationalisation involves very large-scale change and is generally sudden (Chetty and Campbell-Hunt, 2003). The most feasible way to support an international debut under such demanding conditions is through business networks (Sadler and Chetty, 2000). The Managing Director of B approached the publicly funded CDC and highlighted the need for the organisation's support in the "booming" nutraceutical industry. Thus, a 'nutraceutical cluster' was set up by the CDC, with a full time staff member dedicating the majority of their time to the collective needs of cluster members. According to the CDC facilitator, the vision of the cluster, in layman's terms, "is to increase exports for the organisations in the nutraceutical industry, ultimately to benefit those organisations and the Canterbury region".

In essence, the nutraceutical cluster provides member firms with a domestic network in which they are able to exchange international market information and industry contacts and form collaborative alliances. In addition, the cluster has successfully applied for funding from *New Zealand Trade and Enterprise*, which subsidises their attendance at

international trade shows. The purpose of cluster presence at trade shows is two fold: to gain greater recognition and credibility and to reduce costs through organisational sharing.

Whilst participants agreed that foreign networking aided their firms in internationalisation, a commonly cited problem in line with Karagozoglu and Lindell's findings (1998) was in finding suitable partners abroad. However, once established, networks with foreign counterparts have also proved invaluable for New Zealand nutraceutical firms. A is involved in organisational networks in "cut-throat" North America and was alerted to a gap in the market where their product could be manufactured and marketed in a different delivery form. A capitalised on this advice and has since provided their product in spray form – in comparison to the rest of the market that is producing in tablet or liquid form – giving them a lucrative competitive advantage.

5.12 Trade shows

A core function of *New Zealand Trade and Enterprise* is the organisation and facilitation of trade shows in order to promote New Zealand firms in the global marketplace. The organisation offers funding to industry clusters such as the CDC's nutraceutical cluster if they choose to exhibit as a group. When conducting enquiry and during initial market entry, many firms have found trade shows are particularly advantageous in establishing foreign awareness of their brand. E has found trade shows to be invaluable, as these offer the firm the ability to meet the foreign buyers face-to-face and establish business relationships on a personal level. A reiterated the importance of establishing personal relationships with clients, particularly within the Asian marketplace. D believes that trade shows allow firms to establish a greater market presence by "getting [the firm's] name out there".

5.13 Support sources

Varying opinions were offered in regards to the value of support sources, such as the CDC and *New Zealand Trade and Enterprise*. While some found the latter's services very helpful, others were at a loss to describe their frustration. In particular, B expressed their disgust that *New Zealand Trade and Enterprise* had "stolen the company name" by setting up a website under the same name. Furthermore, they felt that the quality of the market research service did not live up to expectation and was "too expensive for what you get." On the contrary, D has found *New Zealand Trade and Enterprise's* services very valuable for entering new markets and identifying customers. The nutraceutical cluster formed at the CDC has left member firms with varying opinions of its effectiveness. While some, such as B, believe the cluster is encouraging local business and would be useful as a collective force should the nutraceutical industry need to lobby the government for regulatory change, others simply view it as an information source, with little impact on the profitability of their business.

5.14 *Firm growth*

The growth of the nutraceutical firms studied was largely positive, with sales and internationalisation increasing gradually. Firms, such as A, found that ongoing adaptation is requisite to continued growth in the constantly changing nutraceutical industry. A's manager cites a 'three year window', a period during which he has a first mover advantage, after which a "generic" is produced en masse, at a cheaper price, effectively eliminating A from competing in the market. Thus, a stepwise pattern of sales growth is observed: sudden boosts in sales with innovations followed by a levelling-off period where turnover is relatively stable. This pattern continues, forming a relatively straight-line, upwards trend in sales growth. Even international new ventures which internationalise from inception seem to follow an incremental path of continually increasing the extent of their internationalisation. Thus, whilst the traditional stages model towards internationalisation (Johanson and Wiedersheim-Paul, 1975) does not appear to fit the New Zealand nutraceutical scenario, the concept of gradually increasing stages of internationalisation is appearing in sales growth. In essence, once a firm has internationalised, their initial experiences will aid in expediting entry into additional foreign markets. D, classified previously as a 'late' born global, found that after they began exporting to the United States in 1980, they quickly gathered momentum and grew rapidly due to their international experiences. Subsequently, D's growth increased considerably as they entered several European markets in a relatively short period of time.

6 **Conclusions**

This paper provides initial insight into the New Zealand nutraceutical industry. Explorative case studies were used as the research tool due to their qualitative nature providing the rich, in-depth data necessary in an area that has not previously been researched. However, the findings are limited in their reliability and validity due to a lack of quantitative verification. Further research is needed in order to validate the findings.

While the findings from the case studies of New Zealand nutraceutical firms are limited by industry and location specificity, they do provide valuable insight into the relevance of Antoncic and Hisrich's (2000) model of international entrepreneurship. Table 1 summarises Antoncic and Hisrich's (2000) propositions and indicates their validity in the New Zealand nutraceutical industry.

During the course of the research, several factors emerged as fundamental. Primarily, the international strategy and orientation of a firm and its management staff appeared to have the most significant impact on performance. Firms that were heavily focused on internationalisation were more likely to be international new ventures and, subsequently, achieve a greater ratio of international sales.

Larger firms did not appear to have greater levels of internationalisation; rather, small firms were competing just as competently as their larger counterparts. Indeed, small firms were more likely to be international new ventures.

Table 1 Validity of Antoncic and Hisrich's (2000) propositions

<i>Propositions</i>	<i>Supported?</i>
P1 Time and mode will be associated with internationalisation	
● Time	Yes
● Mode	No
P2 Environmental conditions will be associated with internationalisation properties and performance	
● Characteristics of the domestic market	Yes
● Characteristics of the foreign markets	No
● Market internationalisation	Yes
● Industry	Yes
P3 Organisational characteristics are related to internationalisation properties and performance	
● Firm size	No
● Strategy	Yes
● International experience	Yes
● International orientation	Yes
● Networking	Yes
● Other founders/managers' characteristics	
● Education	No
● Other firm characteristics	
● Trade show attendance	Yes
P4 Internationalisation will be positively associated with firm growth	Yes
P5 The association between internationalisation and profitability will be non-linear (reversed-U-shape)	No

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Notes

¹All names have been changed to protect anonymity.