8. Managing the Global Operation

TIM MAZZAROL

Small firms that choose to enter international markets face the same management problems of their larger counterparts, and the same challenges of international market entry. However, unlike their larger counterparts small firms must operate within overseas markets without specialist management skills and a deep base of financial resources. This chapter examines the key aspects of how small firms can manage their international operations, specifically their export marketing and foreign joint venture activities. The term “globalisation” is used to refer to the process of exporting, and the production and distribution of goods and services, including the growth of a firm’s engagement and investment in overseas markets.[1]

The role and importance of small firms to the global economy is illustrated by their relative contribution to the business activity within most countries. An example is that of the 18 countries that comprise the Asia Pacific Economic Cooperation (APEC) region, where small firms comprise over 98 percent of all enterprises, 60 percent of all private sector employment and 30 percent of all direct export activity.[2] Within the United States small firms (< 500 employees) comprise in excess of 70 percent of all firms while in Europe small firms, of whom 20 percent are engaged in exporting, account for around two thirds of all employment.[3] [4] While small firms typically account for around 95 percent of all business activity in most economies and around half of value added production, they contribute less than one third of manufactured exports and below 10 percent of foreign direct investment.[5] Small firms continue to be under represented within the global economy despite the opportunities that can be derived from international trade.[6]

For the purposes of analysis the definition of a small firm adopted in this chapter is that used by the European Commission which defines small to medium sized enterprises as having fewer than 250 employees and less than $50 million euro in annual turnover.[7] It should be noted that small businesses are those with less than 50 employees and below $10 million euro annual turnover and micro-enterprises have less than 10 employees and $2 million euro in annual turnover.[8] This equates with definitions used by APEC, where small businesses have below

100 employees, or Australia where a business is small if it has below 20 employees and medium with less than 200 employees.[9] [10]

This chapter begins with an overview of the role of small firms in the global economy drawing upon OECD and APEC studies, and then reviews the literature relating to the management of international markets as it relates to small firms. It then draws upon evidence from small high technology firms in Australia to illustrate examples of how such international operations can be managed. It is a major premise of this chapter that the key success factors in the global operation of the small firm are the quality of its senior management, their commitment to international operations, and their ability to establish close, almost partner-like relationships with leading customers and key suppliers.

THE INTERNATIONALISATION OF SMALL FIRMS

A useful starting point in understanding the managerial issues associated with the globalisation of small firms is the work of the so-called “Uppsala school” of internationalisation.[11] Their study of Swedish firms from the 1970s found that internationalisation is a process of managerial learning. Incremental in nature, internationalisation frequently commences with the firm entering foreign markets where cultural similarities are highest thereby reducing the level of “psychic distance”. Market experience and knowledge builds the confidence of the firm’s management team, leading to greater commitment to the export market, which in-turn leads to enhanced knowledge and further commitment to the overseas market. This self-reinforcing cycle sees managerial learning as the key driver for future globalisation.

A contemporary study undertaken in the United States into the exporting behaviour of small firms identified a six-stage process of internationalisation. The first stage in this process was no interest in exporting. During the second stage the firm was likely to respond to unsolicited export orders, but frequently did not follow up and commence regular exporting. In stage three the firm’s management typically begins to actively explore export opportunities, and by stage four will have experimented with exporting to “psychically proximate” markets in keeping with the internationalisation pattern noted by the Uppsala School. Having committee to an overseas market the firm’s management will begin to learn and adapt to the market’s conditions during the fifth stage. As the international experience of the firm’s management team grows the sixth stage is likely to see them seeking export opportunities in psychically distant markets.

Future internationalisation is likely to proceed in stages with the capacity of the firm's management to learn and adapt to overseas markets being a key factor in the pace of globalisation.[12]

THE IMPORTANCE OF MANAGEMENT

Research has suggested that the size of the firm is less important than the quality and dynamism of the management team. For managers within small firms their willingness to respond to unsolicited export orders is likely to be important as this can help to shorten the export development cycle. Managers may wish to target psychically proximate markets and gradually formulate an export development policy and plan designed to explore new markets.[13]

Management attitudes towards exporting and international trade have been found to be most important to determining the success of globalisation within small firms.[14] As the experience of managers within international markets grows they are likely to switch from indirect to direct methods of exporting. This is important because greater control over the product or service within the export channel will provide the firm with greater control and enhanced levels of market information. Selling costs can also be reduced by removal of intermediaries and the firm will strengthen its relationship with the customers through direct contact. While the direct export process involves more compliance costs this is likely to be viewed as acceptable given the other benefits already outlined.[15]

Research into the pattern of international within small firms suggests that exporting is typically initiated by a key senior manager who is influenced by such factors as their family background, foreign birth or overseas education and experiences. Younger managers are more likely to engage in exporting than their older counterparts. It is also likely that the firm's management will have decided that it has some form of competitive advantage to allow it to compete overseas, or it may be under pressure from within its domestic market. Export motivations are often opportunistic and driven by customers.[16]

The internationalisation process followed by these firms is consistent with the Uppsala School's theory showing early target markets are psychically proximate and that export development is incremental in nature following defined stages. Small firms seeking to expand overseas are advised to target markets where their management feels comfortable doing business, and to develop each market in-depth before moving onto new ones. Attention should be given to long term growth rather than short term profit. It is also important for the firm's management to seek to match its capabilities to those of successful exporters. Language skills, experienced sales and marketing staff should be part of this. The quality of the management team is probably the single greatest determinant of success in exporting.[17]

The export behaviour of a firm is therefore less likely to be influenced by its size than its management team and the managerial attitudes and experience of the firm's senior managers. In this sense the firm's organisational culture is likely to be a significant determinant in the internationalisation process. Culture can serve as a trigger or barrier to the firm's export behaviour and global ambitions. There seems to be some similarity between medium sized firms and large firms over such issues with managers from these types of companies sharing similar attitudes and values than is the case with their smaller counterparts. Managerial attitudes and experience are therefore viewed as the key factors in the globalisation of small firms.[18]

DOES SIZE MATTER?

Although the role of management has been viewed as being more important than the sheer size of the business, research has sought to examine the impact of size on internationalisation.[19] Empirical analysis has produced mixed results suggesting that size may have an impact on export intensity (e.g. the level of export sales as a percentage of total sales).[20] This may also be related to the firm's performance in international markets which is likely to be influenced by the managerial competencies and experience of the management team.[21]

The size of a firm's workforce – frequently used to define small firms from large – has not been found to be a significant influence over export behaviour. However, some evidence has been found to suggest that size does matter, at least in some instances.[22] Further, as the firm develops its international operations it is likely to move from indirect export (e.g. using export agents) to forward integration into the export marketing channel with a shift toward direct control and the building of overseas production or sales facilities.[23]

A firm's propensity to export may be related to the size of its sales turnover, the number of markets that it is serving or able to serve, specific markets served and such factors as the stage of its internationalisation and strategic intent. As a business grows in scale its capacity to service multiple overseas markets will increase and it is likely that very small firms will find it

difficult to engage in exporting due to resource constraints. In this regard the smaller firm may possess a more negative attitude toward internationalisation.[24]
The process of a firm's internationalisation appears incremental in nature, following a pathway in which the management's propensity for exporting is contingent on a combination of internal and external factors. Rational economic decisions about which foreign markets are likely to return the best results from investment are balanced with the evidence that managerial learning sees internationalisation follow an incremental, staged approach. Managerial learning and the capacity for the management to form and use international networks also appears significant.[25]

THE IMPORTANCE OF MANAGERIAL LEARNING

For the majority of small firms the key element in determining their success is the managerial skills and capacity of their senior managers, who are typically both owners and managers, and who need to balance any future growth against their own personal commitments and managerial competencies.[26] Within international markets the types of competencies that are likely to be valuable include: proficiency in multiple languages; the experience of having travelled or worked abroad; a willingness to move with confidence from one country to the next; cultural sensitivity and understanding of cultural differences; and a global or international vision. It is also considered to be desirable for managers to have the capacity to work in multi-national and multi-cultural teams.[27]

Within many small firms the level of formal management education is limited.[28] Although small business owner-managers are generally experienced in their industries, their relative lack of formal management skills can be an impediment to their business performance.[29] Research into the learning behaviour of small firms suggests that there are at least three forces at work that need to be considered. The first of these is the individual learning process that the manager might undertake. This may be either formal or informal in nature and is typically motivated by the need to solve specific problems associated with the business. The generation of tacit knowledge through learning by doing is a common outcome. The second force at work is that of the firm's internal context including the organisational culture and communications flows. An important influence within the internal context is the previous experience of key managers within the firm. Finally, the third force at work is the environment external to the organisation. Here a major source of knowledge and learning is derived from

both formal and informal business networks, which the firm's management will access for advice, ideas and knowledge.[30]
Evidence from studies of small exporting firms suggest that the key factors motivating internationalisation are less associated with money and more with the opportunity to acquire new knowledge and skills while simultaneously broadening firm's capacity. For most small firms the decision to export is fraught with risk and uncertainty, the costs associated with the establishment of an export market may make any profits marginal in the early years. Under circumstances such as these the management of a small firm is likely to look for other things to motivate its continued involvement in overseas markets. These additional factors appear to be the opportunity for new learning and this may be more important to the continued engagement in international markets than profits.[31]

THE IMPORTANCE OF MARKET SEEKING BEHAVIOUR

Previous research into the internationalisation of firms has highlighted the importance of managerial attitudes and the ability of managers within small firms to respond to unsolicited approaches from foreign customers, find psychically proximate markets, and gradually expand their international operations through a process of learning by doing. However, there is evidence that many small firms; particularly those engaged in high technology areas, are "born global".[32] Such firms are found in most industries but are characterised by management that see the world as their natural marketplace. Of importance to such firms is the skill of marketing with strong emphasis on state of art communications technologies to assist them to keep in contact with overseas customers. Such firms tend to adopt product differentiation strategies to secure competitive advantages.[33]

The emergence of "born global" firms was recognised during the 1990s with the advent of the Internet and the opening up of markets previously closed in the Cold War era to many service firms.[34] Since 2001 there has been recognition that the most appropriate way to view the globalisation of small firms is through a blending of entrepreneurship and marketing theory.[35] Such firms are challenging the original Uppsala model of internationalisation by aggressively targeting overseas markets without waiting for the incremental learning and preference for psychically proximate markets. However, such firms are typically found within the high technology sector where products are more naturally plugged into global supply chains, and international market seeking behaviour becomes an essential element in securing venture capital financing and market growth. Without access to global supply chains and international financial markets such firms would struggle to commercialise their technologies.[36]

From a strategic perspective the most common behaviour found among small firms is that of an opportunistic or emergent strategy.[37] The high technology, "born global" small firm can be likened to that of a "prospector" that seeks to gain competitive advantage through innovation and new product development, as compared to other firms that are more content to simply defend market share, react to market changes.[38] Analysis of the relationship between the strategic orientation of small firms and their internal resources suggests that technology focused "prospector" firms are likely to be as successful as managerial "analyser" firms that make use of marketing strategies to gain an enhanced competitive position.[39]

Research into the strategies followed by small firms seeking pathways to globalisation indicates that attention might be given by management to one of two avenues. The first focuses on global market opportunities while the second is more regional in nature. Global firms tend to sell the majority of their products overseas and follow a highly focused product strategy with a few specialised items being the core of their export activity in a wide range of overseas markets. By contrast the more regionally oriented firms remain heavily engaged in their local or domestic market and tend to offer a wide range of products into only a few overseas countries. The regional firm is more likely than the global firm to seek direct control over their marketing channel, even moving to establish its own manufacturing operations offshore. Small firms seeking to successfully globalise need to follow emergent focused strategies supported by a management style that is entrepreneurial and able to learn and adapt within overseas markets.[40]

It is important for small firms seeking to secure a competitive advantage in international markets to possess entrepreneurial and internationally focused management teams. Their commitment to global competitiveness and to view the world as an opportunity for growth is critical to success.[41] Research evidence suggests that enhanced export performance is associated with the development of a competitive export strategy. This competitive strategy is likely to be influenced by the export competencies of the firm's management, their capacity to seek out information about overseas markets, and the quality of these sources of market intelligence.[42]

For small firms seeking to expand into international markets the most important relationship is with the customer, particularly leading customers who assist the firm to develop its market access and enhance its products and services. Such close relationships with customers allow these firms to gain access to high quality information on market conditions which is crucial to the process of new product development and innovation.[43]

THE IMPORTANCE OF NETWORKS AND ALLIANCES

Networks and alliances offer small firms an opportunity to build strategic market positions that offer enhanced competitive advantage.[44] Most small firms lack the resources to implement all their desired strategies. However, through the formation of networks and alliances a small firm can create new market value widening its range of customers or the reach of its products. It can also build up its capability by acquiring access to resources that it does not possess, and it can defend its market position by collaborating against new market entrants or substitution threats.[45]

For small firms seeking to secure competitive advantage within foreign markets the creation of a joint venture with a local partner can prove a successful strategy. Such alliances offer the small firm access to local market knowledge and information, as well as the resources and networks of the partner firm. However, the selection of an appropriate joint venture partner is a crucial decision that can prove highly challenging.[46] A problem for the managers of many small firms is their lack of experience in dealing with foreign partners and the associated language and cultural skills required for international business. Yet a successful alliance strategy can assist the firm to increase sales channels, access new market intelligence and accelerate the return to investments in marketing.[47]

Overseas customers can be an important element in the strategic network of the small firm. Analysis of the strategic networks of businesses suggests that they operate on three levels. The first is the “production network” layer that comprises the supply chain relationships including customers and suppliers within who the firm is closely engaged. The second level is the “resource network” layer, which comprises the horizontal relationships such as with banks or venture capital suppliers, research centres, government agencies and chambers of commerce. Finally, the third level is that of the “social network” layer that is the interpersonal relationships that develop between the management team of the firm and other actors within the first two levels.[48]

Customers in overseas markets are generally highly important to small firms because they generate the cash flow to make the international business activity worthwhile. They also assist the firm to determine how it will configure its products or services and adapt them to meet the needs of the foreign market.

An important aspect of dealing with overseas customers is how they might exert influence over the supply chain relationship and the nature of such influence strategies. The influence strategies followed by customers can vary from one geographic area to another, and are likely to change over time. Research suggests that customer influence strategies will change the intensity and nature of the relationship between the firm and its customers. Taxonomy of four generic types of relationship has been identified, determined by whether the relationship has low or high levels of mediation (e.g. use of legal controls, financial rewards or penalties or coercive actions such as threats to take the business elsewhere); or high or low levels of non-mediation (e.g. expertise, knowledge or reputation). The first type of relationship is that of the "inert complacent" where the two partners are generally satisfied with the relationship, but there are low levels of mediation or even non-mediated influences. Such relationships are characterised by loose cooperation and coordination. The second type is that of the "collaborative strugglers" with low mediated but high non-mediated influence. This type of relationship is characterised by high levels of trust, understanding and satisfaction. The third type is the "problematic satisfiers" who have high mediated but low non-mediated influence. In this type of relationship the power lies mainly with the customer who use contractual agreements but who elicit little trust and understanding. Finally there is the "hazardous agitators" type where levels of both mediated and non-mediated influence are high. In this group there are uncertainty, distance and mistrust often resulting in a doomed or stagnating relationship.[49]

Learning how to manage international relationships with customers or joint venture partners is therefore an important skill that managers within small firms must develop to ensure sustainable success in international operations. The formation of international joint ventures is likely to be a major element in the long term success of a small firm's globalisation strategy. However, the ability to keep a joint venture from collapsing appears contingent on the capacity for both partners to learn at broadly similar rates. Knowledge exchange is a critical element of the operation of an international joint venture. Partners must learn about each other and develop congruity in relation to their mutual goals and vision. Where one partner becomes too dependent on the other due to their rate of learning being slower, it is likely that conflict will arise. The level of manager interaction within the social network layer can also be important, with personal relationships bounded by trust and mutual respect being highly important. Most international joint ventures (JV) follow a four stage development process. This starts with "formation" of the partnership and moves to "development" of the JV that includes selection and appointment of the management team. In the third or "implementation" stage, in which vision, mission, strategy and staffing activities occur. Finally in the "advancement" stage the mutual learning and knowledge transfer between partners is the key feature of continued success.[50]

While customers offer the most important relationship for small firms, there is also a significant role for key suppliers. Such suppliers are essential to the firm's ability to undertake its business and influence its international competitiveness by offering quality components, speed of delivery, flexibility or price advantages. As a small firm grows it will expand its relationships with key suppliers. Firms tend to rely more heavily upon suppliers during periods of growth, and need to ensure that they maintain effective relationships with key suppliers. It is important for the management of a small firm to carefully select its suppliers to ensure that they remain effective over the long term and can offer the firm continued support throughout the growth cycle. Small firms that succeed in following growth strategies tend to rely upon s few key suppliers with whom they form strategic partnerships. They are also likely to concentrate on making these relationships work to their advantage. The successful small firm engaged in a growth process within international markets is unlikely to have an open market approach to securing its suppliers. Rather than relying on competitive bidding by suppliers, it is more likely that they will build upon trusted key suppliers with whom they have close alliances built on trust and mutual learning.[51]

THE IMPORTANCE OF OTHER FACTORS

Our review of the literature over the past thirty years suggests that the majority of small firms are likely to follow an evolutionary path to internationalisation in which the attitudes and experience of the firm's senior management are likely to be critical to the decision to export and expand overseas operations. Small firms that are engaged in high technology areas or that have products or services that are best sold into global markets may break this paradigm and follow a "born global" strategy.[52] Managerial learning plays an important role in the successful globalisation of the small firm, with the management team's experience of living or working within a foreign market helping to determine international market selection decisions. For most small firms the ability to form strong networks and alliances with leading customers, key suppliers and joint venture partners is likely to determine success. Cooperative strategies involving partnerships within the supply chain are likely to be a strong preference among small firms engaged in international markets. Personal social network of the firm's senior management and the influences of leading customers and key suppliers are also likely to play a role in ensuring export success.[53]

Successful exporting behaviour is also likely to be linked to the firm's ability to invest in staff training, process innovation, outsourcing and the use of export support and promotion programs.[54] Small firms seeking to engage in global operations are likely to face a variety of internal and external barriers. Major internal barriers are the lack of information about overseas markets, or a lack of skills and competencies in exporting. Many small firms also suffer from poor international marketing competencies with inadequacies in relation to product, pricing, promotion, distribution and logistics within overseas markets. Major external barriers are heavy compliance costs associated with regulatory burdens, and a lack of government support to exporters. Other factors such as tariff and non-tariff barriers, unfavourable currency exchange rates and language or cultural barriers might also play a role. While small firms can address internal barriers they can usually do little about external factors, particularly those relating to the economic or regulatory environments. Managers from small firms seeking to engage in international operations should acknowledge any potential barriers to their export development and seek to enhance their knowledge about foreign markets by making use of internal databases, market intelligence from customer and supplier networks, and market research services. They should set priorities for dealing with such problems, and devote time to analysing the causes of each while estimating their ability to resolve them. Using such information as can be obtained, they should seek to take corrective action and monitor progress using feedback from customers, agents or other sources of information.[55]

The best source of information on market performance for small firms is likely to be their customers, or at least their overseas agents. This is particularly the case for those firms engaged in the development of new products or those involving high technologies. While the benefits of partnering with key suppliers is likely to be viewed as valuable by small firms engaged in international markets, the most beneficial from a financial perspective is likely to be with their leading customers. The benefits accruing to the small firm across its production network layer are likely to overwhelm those found within the resource network layer. In other words working with leading customers and key suppliers to enhance existing products and services is likely to generate more immediate financial benefits to the small firm than working with third parties on R&D, new product development; or engaging with government agencies to secure export support assistance.[56] The value placed upon professional market research agencies, government export development services, business advisors and banks are likely to be substantially less than for customers, agents and their own market research efforts.[57]

EVIDENCE FROM SMALL HIGH TECHNOLOGY FIRMS

To illustrate the operational behaviour of small firms within global markets evidence is drawn from a series of studies undertaken within the Australian high technology sector. During the period 2002-2004 a series of research studies were undertaken into the networking and strategic alliance behaviour of small firms engaged in the Australian information communications technologies (ICT), defence technologies, marine engineering, shipbuilding and digital content sectors.[58] [59] [60] A feature of these industries was their high level of "born global" firms and the need for these firms to actively engage in international operations with respect to both their production and resource networks. These industries were all located in Western Australia, which is one of the most geographically isolated regions in the world and this imposes significant logistical hurdles on managers seeking to maintain global operations.

A survey was undertaken of 114 firms within these high technology industries involving a mailed questionnaire sent to the chief executive officers (CEO) of each firm. Ninety-five percent of these firms had less than 200 employees. Sixty-three percent of these firms were engaged in exporting with at least one leading customer being located overseas. The average length of time firms had been involved in exporting was eleven years with some firms having been engaged in overseas markets for over thirty three years.

Fifty-six percent of the exporting firms reported that their overseas customers were either important or critically important to their overall business performance, with 76 percent reporting that these leading customers acted as market opinion leaders who helped to gain credibility for their products. For the majority of these firms leading customers were viewed as playing an important role in driving performance by demanding high quality and service. Almost half the firms considered their leading customers as acting as developmental partners for ideas that the firm had originated, or major sources of new ideas or new need identification. Eighty-two percent of the exporting firms reported having worked with their leading customers to improve products. These findings highlight the use of customer feedback to enhance organisational learning as well as product and market development.

In terms of managing the relationship with leading customers the most important form of communication was that of face-to-face contact between senior managers of both firms. Table 8.1 shows the results of the survey giving the proportion of respondents who felt that different types of communication were important in working successfully with leading customers.

Table 8.1 Importance of communication types with leading customers

Question item:	Important
The importance when working with customers:	
Face-to-face contact between senior managers	86%
Face-to-face contact by technical staff	71%
Face-to-face contact by sales & marketing staff	65%
The importance when working with customers:	
Customer contact via email	75%
Customer contact via telephone/fax	48%
Customer contact via trade shows	27%

Notes
Results based on a survey of 114 small businesses.

It can be seen from Table 8.1 that direct contact between technical staff and customers was considered important by more respondents than direct contact with the firm's marketing and sales staff. This is due to the need for such face-to-face visits to involve discussions over the technical development of the products. By comparison with a marketing or sales manager, a technical or production manager is more likely to identify opportunities for further product improvement when they talk to the customers. Also worthy of note from Table 8.1 is the relatively high importance placed on email by the firms. The ability to communicate using the Internet with leading customers located overseas is a major bonus to small firms seeking to develop global markets. The frequency of such contact is also worthy of consideration. Among the firms engaged in international markets, 57 percent reported face-to-face meetings taking place between leading customers and senior managers at least monthly. Similar meetings between sales and marketing staff and leading customers were taking place on at least a monthly basis by 65 percent of firms. Seventy-three percent of firms reported meetings taking place between their technical staff and leading customers on a frequency of at least once a month. Eighty-four percent of companies reported being in daily or weekly email contact with their leading customers.

In terms of key suppliers significantly fewer firms had formal contracts or agreements with overseas firms with over half the respondent firms claiming that suppliers located overseas had little real impact on their performance. Only 24 percent of firms considered suppliers within their overseas markets as a key source of innovation. Compared with customers, the role of suppliers as a source of new ideas or as an important partner in the firm's performance was generally viewed a being of less relevance.

With respect to alliances and networking, 13 percent of the 114 firms surveyed reported having export distribution agreements with locally based partners. Thirty-two percent of firms reported some product development was being undertaken with overseas partners and 16 percent some form of process innovation. A further 17 percent had commenced joint production activities with overseas partners, while 31 percent were involved with joint marketing and distribution links with overseas partners. Only 10 percent of firms were engaged with overseas partners for the raising of venture capital.

The use of strategic alliances to secure access to new technology was also examined within the study. Thirty-six percent of the technologies used by these small firms were reportedly sourced from overseas. As shown in Table 8.2 the most important overseas source of new technology were key suppliers followed by other companies in the same industry. Overseas leading customers were also an important source of new technology for about a quarter of the firms. These findings highlight the use of overseas networks by small firms to access new technologies that can be applied to their production. Small firms have been found to make use of strategic networks and alliances to secure access either to new market opportunities, additional resources or the protection of existing market share.[61] These survey findings highlight the importance of not only of customers and suppliers as sources of market information, advice on new product development and technology, but also the need for senior managers to maintain close personal contacts within these networks. Managerial learning through this continuous communication with customers and suppliers would appear as the key outcome with benefits to the firm's operations and innovation.

Table 8.2 Importance of overseas sources of technology

Question item:	Important
The importance of source for new technology:	
Other companies in your industry	31%
Companies in other industries overseas	19%
Overseas universities and research institutes	9%
The importance of source for new technology:	
Overseas key suppliers	46%
Overseas leading customers	24%
Parent or sister company	20%

Notes
Results based on a survey of 114 small businesses.

The following sections help to further illustrate the nature of how small firms manage their global operations by drawing upon case studies from three selected industry sectors: shipbuilding, boatbuilding and wireless communications.

CASES FROM THE SHIPBUILDING SECTOR

The commercial shipbuilding sector may be defined as those firms engaged in the design and construction of vessels greater than 8-10 metres in length. Since the 1980s Australian shipbuilders have invested substantially in innovation, research and development, and workforce skills training and development. Despite having only a modest industry by world standards, Australian shipbuilders, particularly those engaged in the construction of lightweight aluminium multi-hulled vessels have positioned themselves as significant actors within the global market.[62] Sixty-five percent of the industry's turnover is generated from defence related activities, with commercial shipbuilding, repair and maintenance making up the remainder.[63] Three case studies are selected to illustrate the pattern of activity in this sector. For purposes of confidentiality these firms have not been identified. They are referred to merely as Shipbuilders 1, 2 and 3. All were well established firms based in Western Australia and specialising in the design and construction of aluminium vessels from 10 to 100 metres for a range of civil, police and military purposes. The three firms all undertook their own design work, but outsourced varying amounts of the production operations, usually in areas of specialist engineering. At time of analysis all three firms had grown to a size where they were able to establish divisional structures and develop greater in-house capacity. Between 50 and 80 percent of their production was sold to overseas customers.

These customers were located throughout the world with Europe, North America, Asia and the Middle East all being targeted for market development. All three shipbuilders maintained close and highly cooperative relationships with their leading customers. The nature of these relationships was generally close and based on fairly high levels of trust. Communication intensity between the shipbuilders and their leading customers was high. In all cases the main point of contact between the firm and the customer was the CEO, who was responsible for initial establishment of the relationship and also ensuring that it continued smoothly. The CEO of each firm was found to be a highly networked individual who used their personal and professional links to secure new contracts and reinforce existing ones. These CEO were also major shareholders in the firm and had essentially been the entrepreneurs that had founded these businesses.

As highlighted in the survey results, it was common for the CEO of these three firms to be travelling overseas regularly to meet with customers and ensure that a personal touch was put on the company's products. There was a trend in one of the shipbuilders (Shipbuilder 3) to encourage contact between customers and lower level management from the company. It was felt that this assisted in keeping the entire firm in touch with the needs of customers

The three shipbuilder firms worked closely with their customers over the design, development and manufacture of each vessel. As explained by the CEO of Shipbuilder 1 the company had a policy to *"be honest to customers…have their trust…know what they want and deliver exactly as requested"*. These close customer relations had led to the generation of new sales as well as enhancing the product performance and securing customer referrals to new potential customers. However, despite these close customer relationships all shipbuilders viewed their ability to retain their customers as dependent on their ability to offer high quality, on time and on cost delivery and products tailored specifically to the needs of the customer.

Customers were viewed by the shipbuilders and being sensitive to price, but also attracted by their ability to deliver tailored products. Shipbuilder 3 gave an example of a contract to build a new vessel for a buyer who was known to be price sensitive. Three local firms tendered for the work including Shipbuilder 3, who was surprised to find the contract let to a competitor for a final bid price that was AUD$100,000 more than the next highest bid. According to Shipbuilder 3, this was attributed to the ability of the successful tender to know exactly the style of vessel required by the customer and tailor their offer to these needs.

All three shipbuilders exported the majority of their products. For example, eighty percent of the vessels produced by Shipbuilder 1 were sold to overseas customers, with most new business coming from marketing activities and referrals from existing customers. The firm's management team used their leading customers to provide market intelligence over competitor activities. The main focus of attention for Shipbuilder 1 was not on the customer firm, but on key personnel within these firms. They targeted people within their customer organisations who served as "gatekeepers", able to open the door to more networks and new customers.

The three WA Shipbuilders also maintained joint ventures with other firms both within Australia and overseas. For example, Shipbuilder 1 supplied some vessels in a kit form to a joint venture partner in Asia who undertook the final assembly. This was frequently necessary in defence related contracts where the foreign government required some local offset production to help boost their own defence industry capability. Within the local defence industry sector collaborative alliances were normal for large contracts in which shipbuilders joined with defence specialists in armaments, electronics and other naval systems to complete the final product. Such alliances were viewed as an opportunity to enhance capabilities and transfer new knowledge and technologies. The larger shipbuilders were also establishing spinout ventures with a focus on the design and manufacture of specialist components. The creation of these new ventures was designed to enable the sale of these new technologies and services to other rival shipbuilders.

CASES FROM THE BOATBUILDING SECTOR

The boatbuilding sector is characterised by a relatively large number of small firms producing vessels of less than 8-10 metres in length. It is difficult to accurately estimate the precise number of firms within the Australian boatbuilding sector, their size and annual turnover. Within Western Australia it has been estimated that there are around 200 firms engaged in boatbuilding of which most are very small.[64] The sector can be broadly divided into luxury and mainstream boatbuilding. Luxury boat builders need to invest larger sums of private capital to acquire land, tooling and skilled labour for the production of craft that can take up to 1-2 years to complete. For the lower-end leisure craft sector, capital investments are typically smaller at start-up, but increase as the business grows and expands

Within the luxury boat segment of the market, buyers are located throughout the world with no specific concentrations geographically. Such customers can also be difficult to reach for new entrants to the market. Each luxury craft is custom made and may take an average of 1½ years to complete. Buyers initiate purchase and initially have considerable bargaining leverage. The potential for repeat purchase adds to their power. In the lower cost small leisure craft sector, the buyers consist mainly of dealerships and business-to-business interactions. Dealerships are located both within Australia and overseas. Many dealerships are difficult to reach for new market entrants due to pre-existing relationships with competitors. Each boat is standardised with minor custom-made alterations, and takes an average of 4 weeks to 6 months to build. The dealerships usually initiate the purchase and have considerable bargaining leverage. Boatbuilding demands the development and delivery of products that fit tight price-quality-performance ratios, plus the ability to deliver on time to such specifications. Prices can vary substantially depending on fit-out and features, as well as basic construction materials. It is relatively easy for customers to switch from one builder to another, although in practice a high degree of customer loyalty is to be found. In general the customer's propensity to change boat builders is linked to their financial resources and personal preferences.

Four case study firms were identified and selected for analysis – boat builders A, B, C, and D. Boat Builder A is a specialist manufacturer of sports, fishing and pleasure craft, motor yachts and luxury "marine limousines" that serve as tender boats for super-luxury motor yachts (the parent vessel is usually in excess of 75 metres in length). These limousine tenders are valued at AUD$1 million to AUD$2 million each and service the very high premium end of the market. Such craft can take up to 1½ years to complete and require the use of both advanced composite fibreglass materials, and expert craftsmanship in the design, finish and fit-out. Boat Builder B is an award-winning manufacturer of luxury yachts in excess of 50 metres in length, each of which sell for over AUD$50 million. Such vessels typically take up to 2 years to complete. Boat Builder C manufactures fibreglass catamarans and employs innovative hull designs to achieve reduced noise and enhance stability. Boat Builder D is a manufacturer of aluminium vessels for the leisure craft sector. It manufactures in volume. All four of these boat builders were locally owned and had well-established track records within the industry.

Customers for Boat Builder A were primarily multimillionaires comprising a global market of little more than 1,000 persons. Also included in the customer list were brokers, who contracted to supply luxury leisure craft of the kind produced by Boat Builder A, captains of luxury yachts, and boat designers who served as sources of referral. All the firm's customers were located overseas within all parts of the world. There was an equal mix of new and repeat customers. Customers were generally sourced via word of mouth referral, or when viewing the products. Sales contracts were on a boat/project basis and were different every time. It could take up to 18 months to get a contract signed and the building started. A contract could last for approximately 1½ to 2 years and would generally stipulate price, timing and specifications. Boat Builder A worked closely with its customers to improve its end products and service. The nature of the relationship with customers was very personal and friendly, but a long-lasting relationship with such customers was not usually possible. Demand was usually cyclical as the purchase of luxury goods was sensitive to changes in global economic cycles.

Customers play an essential role for Boat Builder A in enhancing credibility and increasing sales, sourcing new ideas through their personal requirements, providing access to new customers and maintaining high quality standards. Direct contact with customers was important so the CEO travelled overseas for an initial contact and to negotiate the contract. Afterwards communication was mainly via email and phone on a weekly and daily basis. The firm's location in Perth Western Australia did not seem to be an impediment to doing business on a global scale. The customers of Boat Builder B were also largely multimillionaires mostly located overseas. As with Boat Builder A, it was important for the CEO and senior management of the firm to maintain close personal relationships with customers during the contracting and production process. All boats were sold prior to the firm commencing production and most customers become closely involved in the design stage to ensure that their individual requirements were met.

By comparison, Boat Builder C was only exporting 60 percent of their product, with domestic sales having previously played a much stronger part in the business. However, competition within the local domestic market had increased in recent years, with falling sales forcing the firm to seek greater exports. The lead customers for Boat Builder C were retail, foreign governments, businesses, and overseas dealerships. Overseas government contracts were seen as a good source of repeat business. As a result, Boat Builder C had sought to establish strong formal business relationships with its foreign government customers, although this was not easy to maintain. The firm's civil export markets were different again, with the key point of contact being overseas dealerships. These agents were a good source of market intelligence on the standards required for finish and fittings in these foreign markets. Boat Builder C had established fairly close personal contact with its key international distributors and sought to keep such dealerships "comfortable" with the firm as a "reliable supplier". The management team at Boat Builder C was willing to listen to any suggestions made by such foreign distributors.

Boat Builder D, was the smaller of the case study firms and sold most of its product within the domestic market via intermediary retailers who also provided after sales service and support to customers. The lead customers for Boat Builder D were domestic and overseas dealerships located throughout Australia, New Zealand, the Pacific and Europe. The firm recognised these dealerships as vital to its success and maintained regular contact. However, many of these dealers had well-established relationships with rival boat builders and were frequently reluctant to harm such existing relationships by favouring one manufacturer over another. The company had made a decision to own and operate its own retail operation in the Perth market with a view to using this business to get a stronger feel for the market and end-user customer. As with the other boat builders, Boat Builder D made significant adjustments to its products when exporting in order to ensure that finishes and fittings were tailored to international standards and tastes. The company sought to partner with its foreign distributors to secure enhanced market penetration and intelligence of local market conditions. Over time a series of strong, formal relationships had emerged between Boat Builder D and some of its overseas dealers.

While key suppliers were mainly located within Australia the majority of these firms leading customers were overseas. These customers played a significant role in driving product innovation and quality, particularly at the luxury end of the market. New ideas for product development and improvements were commonly sourced to customers or overseas based distributors. Regular contact, usually of a face-to-face nature was frequent and supported by emails and telephone calls on a continuous basis.

CASES FROM THE WIRELESS TECHNOLOGIES SECTOR

The wireless technologies sector is complex, involving a variety of different actors engaged in software applications development, content developers and enablers, infrastructure providers, network operators, device and equipment manufacturers and retailers. Since the first wireless telephony communications were commercialised in 1983, the wireless technologies industry has seen rapid and complex changes in the scope of its services, user growth, technological configurations and supply strategies

The industry is characterised by rapid rates of technological innovation and high intellectual barriers to entry. It has been estimated that the take up rates of wireless technologies triples every 16 months, outpacing even computer power which doubles every 18 months. From 1983 to 2001 the number of components in mobile phones increased from 250 to 900 while at the same time mobile phone sizes reduced significantly. In 2001 it was estimated that there were around 640 million users of wireless products and services globally.[65]

In analysing this industry sector, eight case studies were undertaken with organisations engaged within different parts of the production network layer. These were operating principally as application developers, infrastructure providers, device manufacturers and retailers. Due to reasons of confidentiality the eight case study firms examined in this study cannot be identified, however, their general profile can be outlined. All but two were successful commercial enterprises that had experienced good growth and were well recognised within their respective areas of activity. The other two were non-commercial organisations with a predominately R&D function. One of the firms Wireless Case Study Firm 7 (WCSF 7) was headquartered overseas.

Within their production network the majority of the case study firms had formal agreements with suppliers and customers, mostly overseas. These firms were involved in design and testing (alpha and beta) of applications, devices or equipment. Two of the firms were application developers and four were device or equipment manufacturers. Hardware component design and manufacture has become something of a commodity process and is undertaken increasingly in low-cost countries, outside Australia. For the majority of these eight firms their major markets were overseas. These firms understood that the Australian market was too small and the domestic wireless technologies industry too limited for them not be actively engaged globally. Only by developing international linkages could these firms remain competitive and credible within their sector. The major activities or functions within the production network layer of the wireless technologies sector were hardware R&D, components manufacture, software R&D, alpha and beta testing, marketing, distribution and after sales service. None of the case study firms undertook all these activities, focusing instead of areas of specialisation.

The production network layers found among the application developers were similar in structure. For example, Wireless Case Study Firm 1 (WCSF 1) had a production network composed of a number of key R&D hardware and component suppliers, R&D software development partners, alpha and beta test sites and a global distribution and integration firm. This firm obtained hardware components from its key suppliers to provide the physical part of its products while it supplied the software component in collaboration with software partners. The testing of the entire system was undertaken using alpha and beta test sites in conjunction with its lead customers. Once the testing phase was completed, the firm distributed its product through a global distributor with which it had a close association. Most of these linkages were formal agreements and were with overseas organisations. By comparison WCSF 2 also had a production network composed of a number of R&D hardware and component suppliers, R&D software partners, alpha and beta test sites and global distribution and integration firm. As with WCSF 1, the majority of these relationships were formal alliances with overseas organisations. WCSF 2 recognised that the Australian market was too small and that it must develop strong linkages to international partners,

Of the four firms engaged in the manufacture of devices and equipment only one case, WCSF 7 sought to capture a wide spectrum of the activities along the production network. WCSF 4 was a niche player headquartered in Perth providing component design and testing services. Its customers were mainly located overseas, predominately in North America and Asia, and were generally large firms engaged in the manufacture of components. It was the function of WCSF 4 to provide the design services for future components that are then manufactured in Singapore and China. WCSF 5 had a production network composed of specialized suppliers, and a small number of lead customers in established and emerging markets overseas. Each of these relationships was formal in nature. Because all the key suppliers and lead customers were located abroad, the senior managers of WCSF 5 spent much of their year travelling. They saw the Australian market as of significantly less importance than the international markets.

WCSF 6 was primarily a research organisation focusing on hardware and software R&D that it sold or licensed out to other firms. Although headquartered in Australia, the firm did not view the local market as particularly important and saw its main collaborative links as being with lead customers overseas. WCSF 6 was focused on research and new product design and development. The management of the firm viewed their relationships with lead customers as arms length in nature.

WCSF 7 was a Singapore-based subsidiary of a larger Asian-owned corporation headquartered in Hong Kong. It was included in this study as a comparison to the Australian companies. This firm undertook a wide range of activities in the design and development of wireless electronic devices. Its business network comprised key suppliers, lead customers and venture capital providers. This financial partnering was considered a major part of the firm's network. WCSF 7 had a production network composed of several hardware and components suppliers and operators, dealers and retailers. It operated as a vertically integrated organisation undertaking most activities within the production network. Most of its alliances were formal in nature

To illustrate the operation of the resource network layer for these firms, the example of the WCSF 1 can be shown. The resource network of WCSF 1 is quite large in both scale and scope. Access to technology and knowledge is secured via software partners, trade shows, industry groups, Bluetooth groups, beta test sites, telecommunications network operators and even with competitor firms. WCSF 1 was engaged in establishing a users group involving some of its competitors so that they could learn from each other and cooperate for a win-win scenario. There were no linkages with any of the local Australian universities. However, informal links did exist with local and international universities to secure both technical specialists and management expertise. Such links were based on the experience of the senior managers of WCSF 1 who tended to return to the European universities where they had obtained their qualifications to seek future graduate employees. WCSF 1 viewed its links to venture financing as critical to its continued growth. Several venture capital firms had invested in the company and held positions on its board. The firm had secured its financing from the United Kingdom and United States, and had established offices in London and New York to ensure that it could maintain adequate communication with its partners.

Most of the case study firms had comprehensive social networks usually based around their senior executives and key technical staff. It was widely felt among these firms that the social network layer was the most critical because everyone in the company was involved in social networks. Such interpersonal contacts were recognised as valuable channels of information and knowledge flow, as well as sources of technology transfer and innovation. Many of the engineers and managers within these firms maintained contact with their social networks via email and telephone, as well as face-to-face contact at social occasions and trade shows. It was estimated that around 60 to 70 percent of managers' time was taken up maintaining their social networks. Engineers in the same process spent a slightly less but still significant amount of time. Many managers travelled widely to maintain such contacts, particularly overseas. Engineering and technical staff was also frequently involved in such visits, or with the installation of products. Such direct contact with customers was viewed as beneficial to the firm's ability to properly service its contracts and understand the needs of the market. An important observation of the social networking within these firms was that most of these linkages were with people located overseas rather than in Australia.

For example, the social network maintained by WCSF 2 was quite complex. The CEO of the company considered this a critical network for enhancing the flow of ideas and information. All managers and engineers maintained contact with their social network contacts using a combination of email, telephone and face-to-face visits. The CEO also wrote personal letters to customers, suppliers and other important network partners to facilitate and strengthen these relationships. Frequent overseas travel by managers allowed personal contact to be maintained with important contacts and seek new alliances, especially new customers. Because WCSF 2 had a worldwide market such international travel was essential despite the time and cost involved. While the senior managers and sales staff were regularly visiting customers, the firm maintained a policy of having engineering staff become personally involved in the installation of products and communicating directly with customers.

THE CONCLUSION

The overall pattern emerging from this analysis is that the success of global operations is contingent on managerial commitment, learning and strategic networking. This is reflected in the review of the literature outlined earlier in this chapter, and reinforced by the findings from the survey and case studies of small high technology firms operating in the international market place. Most small firms are highly dependent on a few key managers who must be prepared to make a significant personal commitment to the international market, including very high levels of overseas travel and the capacity to establish close working relationships with customers and suppliers.

While the majority of firms may follow an incremental process in their export development, the innovative, technology intensive are more likely to be market seeking or “born global” in nature. Success within global markets requires high quality and innovative products or services. This must be backed up by a total commitment to working with the customer to find ways to improve the existing products. Continuous product development is linked to the firm’s capacity to work in close, partnership like relationships with leading customers. The entire senior management team from the firm, including the technical and R&D staff need to have regular face-to-face contact with customers to facilitate organisational learning and enhance product development and quality. It is not likely that such export intensity can be undertaken on a casual or part time basis.

Strategic networking with customers, suppliers and third party resource network actors such as research centres or venture capital providers, is also an essential element in the maintenance of global operations. The formation and maintenance of these strategic networks is the primary responsibility of the firm’s senior management, often the CEO, and is part of their social networking. Personal contact with customers, suppliers or other network actors on both a social and professional level is essential if the firm is to retain and strengthen its networks. This requires senior managers to possess highly developed interpersonal skills and the ability to operate comfortably in foreign business environments and deal with different cultures.

These findings suggest that managers from small firms seeking to engage in exporting or international business activities must be prepared for a total commitment. They must be willing to configure their firm’s operations to service the needs of overseas customers and adapt their products in response to customer feedback in an ongoing process of continuous quality improvement. These same managers must seek to build strong, partnership like relations with their leading customers and key suppliers, and to systematically build a strategic support network to assist the business with its market and product development.

Policy makers seeking assist small firms to expand their global operations should focus attention on the development of the management team’s international business skills. This should include the area of strategic networking and alliance formation, as well as interpersonal communications. Assisting small firms to invest in innovation and new product development is also a key area for policy support. Without ongoing investment in new technologies and product development it is unlikely that small firms will retain any sustainable competitive advantage. Finally, small firms would benefit from assistance in lowering the cost of travel and communications.

A key potential bottleneck for many small firms, particularly those with high technology products, is reliable access to low cost broadband Internet and telecommunications services. It can be seen from the results of the survey of Australian firms that managers from small firms are in almost daily contact with customers using ICT services. Firms located in some remote or regional areas away from major telecommunications hubs are restricted in their ability to deal with long distance customers due to poor quality ICT services.[66] A similar case can be made for access to low cost and flexible air and freight services. The cost of doing business for small firms located in distant geographic areas is likely to be high. If managers cannot readily access low cost air travel or communications services their firms will be effectively restricted from participating in the global market. This will in turn have flow on consequences for their local economies.

Future research should focus on the distinction between market seeking "born global" firms, particularly those engaged in high technology, innovation intensive sectors, and the more mainstream industries. It is questionable whether there remains any industry that could compete within a global market and be low technology. Researchers might examine the continued relevance of the "Uppsala School's" model of incremental internationalisation to see how the growth of ICT and low cost air travel over the past 30 years has changed these assumptions from the 1970s. Finally, future research should focus on the role of strategic networks and their use by small firms in the development of competitive advantage. There remains much work to do in defining the nature of strategic networking by small firms, understanding how such networks form, how they are sustained, their role in the adoption and diffusion of innovation, and how they are managed.

In closing this chapter we can pose six critical questions that these findings raise:

1. What are the key qualities required of managers from small firms who are seeking to engage in global markets?
2. Define "managerial learning" within the context of a small firm's global business operations and explain why it is so important.
3. Is there an optimal size for a small firm to reach before it can effectively engage in overseas markets or can a firm be "born global"?
4. What are the distinctions between "born global" firms and their more conventional counterparts, and are these distinctions relevant today?
5. Explain the nature of strategic networks and alliances for small firms within international markets and discuss their importance.
6. Discuss the roles of leading customers and key suppliers in the global operations of small firms with reference to the case studies.

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