1. Introduction

The use of various forms of international business cooperation has been the subject of increasing academic and policy-making interest in recent years. It has principally been studied in terms of strategic alliances by large or multinational companies (see for example, Doz, 1992; Harrigan, 1986), but attention has also been given to the role of international cooperation in the internationalization strategies of small and medium-sized firms, particularly those located in geographical concentrations (see for example, Kaufmann et al, 1992). Interfirm cooperation has often been associated with the ability of companies to access foreign markets or foreign resources for the first time. While covering a range of different types of agreements - such as licensing and joint ventures - cooperation can be considered as a business strategy which is distinct from other ways of internationalizing, such as direct exporting and foreign investment. For many firms, cooperation represents a lower-cost, lower-risk and consequently, preferential strategy for expansion into foreign markets.

Given its acknowledged flexibility, Scottish firms might be expected to be active in the use of business cooperation. Scottish exporters face a number of obstacles to market expansion - not least distance, perceived peripherality, the high costs of obtaining market information, and foreign language - which have been linked to the motives for forming cooperation agreements. Furthermore, with the emergence of the Single Market, the issue of interfirm cooperation has been given more prominence in Scotland. Economic integration in Europe has highlighted both the international profile of businesses in peripheral regions and the strategies available to exporters to enter new markets and enhance their international competitiveness.

The external linkages of Scottish firms have, however, not been subject to extensive study. There has been little research on either the strategic alliances of large Scottish firms or the interfirm agreements developed by SMEs. In part, this relates to problems of obtaining data on cooperation agreements made by Scottish firms. For example, the database developed by the MERIT institute at the University of Limburg (on technology-oriented agreements made during the 1980s by European firms) identifies only six companies based in Scotland were identified, though it is likely a far higher number have pursued joint R&D. The focus of research has principally been on the effects of foreign companies developing linkages in the Scottish economy rather than the foreign activity of Scottish firms. In particular, the international linkages of Scottish companies have tended to be considered in relation to foreign direct investment issues, especially loss of control of domestic enterprises through foreign acquisitions, the employment and sales impact of greenfield foreign investments, and the question of the economic 'embeddedness' of foreign-owned operations and their links with the local economy (see for example: Hood and Young, 1982; Turok, 1993).

Based on research recently completed for The Scottish Office, this article examines aspects of Scottish interfirm cooperation in Western Europe (Raines, Bachtler and McBride, 1995). It concentrates particularly on the motives for forming agreements and the relative importance of cooperation in the process of business internationalization.

2. International Cooperation Motives

Before considering business cooperation in Scotland, it is worthwhile reviewing the traditional motives associated with the characteristics of interfirm linkages. The classic description of international cooperation places it between independent exchanges in the marketplace and hierarchical relationships within companies (Williamson, 1975). Within this framework, a variety of structures of international corporate governance can be accommodated, whose common features are distinct from both one-off export
transactions and ownership business strategies (such as greenfield foreign investment or acquisitions). The main defining criteria can be summarized as:

- cooperation is agreed by at least two firms for common cross-border business activities;
- participating firms enter into agreements with the intention of preserving their independence (though changes in ownership may take place during the course of the agreement); and
- the linkages are intended to facilitate a series of transactions or a single prolonged transaction.

This definition covers a diversity of business arrangements - from formal structures embodied in joint ventures to more limited and informal agreements. It also spans a range of business activities that are both upstream (such as supply agreements) and downstream (such as distribution) of the firm as well as focusing directly on the firm's operations (as, for example, research and development). When examining the literature on interfirm cooperation (see, for example, Bachtler and Raines, 1992; Contractor and Lorange, 1988; Harrigan, 1986), the main strategic motives for cooperation are linked to uncertainties in the external environments of firms and limitations in their abilities to control these uncertainties. Factors relating to market entry and expansion, technological change, and organizational restructuring have been cited as the most important motives.

(i) Market factors

Entry to new markets - whether geographical or sectoral - is the area most frequently associated with interfirm cooperation, especially through licensing and indirect exporting via agents and distributors. The motives vary depending on the firm and its market strategies, though in most cases cooperation enables companies to overcome market barriers. For large firms already experienced in exporting from their home markets, the barriers tend to be related to the characteristics of the target market. Direct exporting or direct foreign investment may be discouraged by government-imposed trade obstacles, compelling foreign companies to develop links with local firms to secure entry. In other cases, the markets may be unstable or involve a sufficiently high level of learning costs for a company that the flexibility of cooperation with a more experienced firm may be an attractive initial step for market entry. For example, a company interested in diversification into new sectoral markets can overcome its lack of experience and information through cooperation. Cooperation by large firms in markets can also take the form of cartels, where companies try to regulate existing rather than new markets, though again cooperation is motivated by the inability of the firm to control its markets (Fuller and Porter, 1986).

Uncertainty is also important for smaller firms, but they often face market barriers linked to the characteristics of the firm itself. Cooperation can allow firms with limited resources for marketing and exporting to achieve internationalization though the use of agents and distributors. These can effectively provide direct representation for a small firm that cannot easily create and operate a foreign distribution channel itself, circumventing internal financial, organizational and market information deficiencies.

(ii) Innovation factors

R&D capacity has increasingly become a motive for cooperation. Over the last two decades, the survival and expansion of firms has become more dependent on their ability to create and control technological resources. The greater role of R&D in certain industries - especially those where competition is increasingly global - has raised both the costs and the uncertainty of product development for many firms (Chesnais, 1988). For large firms, R&D costs have risen in response to the importance of 'pure' scientific research, sometimes requiring greater organizational resources than are available to individual firms. Similarly, technological advance in many industries demands the combined use of a variety of technologies, which may not be available to individual companies apart from an extensive and costly use of licensing. As a result, cooperation agreements have been used to limit the uncertainty in generating new products and technologies, allowing control in some cases of the shape and development of the respective sectors of the partners. Smaller firms tend to use agreements in order to access external resources for the development of technologies and products. The resources can include other technologies, finance, as well as marketing and distribution facilities, frequently possessed by larger firms in exchange for the specialist technological developments made by the smaller firms.
Organizational factors

Some forms of cooperation have arisen in order to reduce the uncertainties in changing the internal organization of a firm. Interfirm linkages often result from vertical integration, in which firms gain access to different parts of the production chain and reduce supplier and distribution uncertainty without incurring the costs of full integration during periods of either contraction or expansion. First, it allows firms to achieve economies of scale from the combination of different business activities, decreasing transactions costs such as those incurred from switching suppliers. Long-term supply agreements can provide firms with security of supply in preference to the uncertain costs of acquiring and adapting a supplier to the firm's production system. Second, it can increase the competitiveness of firms through their access to different parts of an industry. Firms are in a better position to adapt to technological changes within an industry because of their ability to implement changes over the production chain as a whole. For example, the close collaboration between large and small firms in just-in-time delivery systems can facilitate the rapid adoption of new production technology where the changes within the larger firm can require alterations to supplier parts and schedules.

3. Methodology

In order to examine the operation of these motives in Scotland, a study was conducted in 1993 of a sample of Scottish-based companies. The research was divided into two stages: a large postal survey of Scottish companies, followed by more intensive face-to-face interviews with a group of companies from the survey sample. A postal survey was made of 1,020 Scottish-based companies, eliciting a response rate of 40 percent, or 409 companies. Twenty-four percent of the resulting sample were small firms (less than 50 employees), 37 percent were medium-sized firms (between 50 and 199 employees), and 39 percent large firms (over 200 employees).

As well as questioning firms about their general cooperative behaviour, the survey focused on the trends in agreements made by Scottish firms in Western Europe since 1988. The geographical area and period were chosen because of the expected impact of the Single Market programme on cooperative behaviour. As has been noted elsewhere (see for example Doz, 1992), publicity surrounding the completion of the internal market appears to have catalyzed a surge in cross-border cooperation activity within Europe. The choice of
1988 as the starting point was mainly determined by the start of the Single Market awareness campaign by the UK Department of Trade and Industry and can be considered a point at which European business opportunities were widely promoted. In relation to these agreements, the survey asked firms about the types of agreements made as well as their purposes. Following the classification of cooperation motives outlined above, each set of factors is examined in turn: market, innovation, organization.

(i) Market motives

The vast majority of linkages formed between Scottish and Western European firms can be described as 'commercial' agreements, motivated primarily by sales-related factors and usually taking the form of a marketing or distribution agreement. Seventy percent of the firms undertaking cooperation in the postal survey formed specifically commercial agreements; a quarter formed production agreements and a fifth were involved in joint R&D agreements (Table 1). The commercial linkages cover a spectrum of agreement types, ranging from personal relationships with particular individuals to more formal contractual arrangements between firms. As would be expected from the prevalence of marketing agreements, when firms were asked about the purposes behind their agreements, marketing strategies again dominated. Market expansion and entry were regarded as central in over 60 percent of all agreements, while the development of new technologies and products were motives in less than a third (Table 2).

In particular, market expansion rather than market entry appears to have been the main motive behind many agreements; 71 percent of all agreements were made for market expansion purposes, as opposed to only 63 percent for market entry (Table 2). This can be largely attributed to the differences in the commercial motives of large firms and SMEs. Commercial cooperation was particularly important for SMEs - 77 percent of their agreements were marketing and distribution arrangements, compared with 64 percent for firms with over 200 employees. In contrast, market entry was less important to larger firms than market expansion, suggesting that their more recent agreements were intended to develop their existing market presence. For example, in the interview survey, several firms explained that they had formed agreements in order to segment national markets either along regional or sectoral lines and consequently expand their initial market presence.

Commercial cooperation strategies were also associated with the use of multiple agreements. In particular, marketing agreements were used more intensively than other forms of agreement. On average, firms with marketing arrangements made 2.4 such agreements, whereas the average numbers of production and R&D agreements were 1.2 and 1.1 respectively, suggesting that the intensity of cooperation can be linked to the type of strategy used by firms. In the interviews, firms noted that market entry and expansion agreements were often adopted for a range of markets while R&D cooperation was limited in many cases to single agreements.

(ii) Innovation motives

Technological and product innovation was a less significant motive for cooperation than commercial development. Only a fifth of the firms in the postal survey had formed joint R&D agreements, as opposed to 70 percent undertaking marketing agreements, though among these firms, this form of cooperation was often central to their business strategies (Table 1). As with commercial agreements, innovation cooperation was closely linked to company size, but it tended to be more common among large firms than SMEs. A third of large-firm agreements in the postal survey involved the development of new products and technologies, as compared to only eight percent of SME agreements. Similarly, the share of large firms for whom innovation was a motive in their agreements was twice that of SMEs - 38 percent as opposed to 19 percent (Table 2).

The differences between the importance of R&D motives to large firms and SMEs are greater than the differences for commercial linkages, mainly because of the significance of resource-intensive innovation to larger firms and their greater opportunities for pursuing R&D cooperation. Existing research has suggested a strong connection between intensity of R&D expenditure and interfirm cooperation (Colombo, 1995). As R&D agreements often require greater resource commitments than marketing agreements, large firms tended to be in a better position to develop such forms of cooperation.

Innovation cooperation could be subdivided into two distinct types of linkage, according to the results of the interview stage of the project: horizontal (or project-specific) linkages and vertical (or supply) arrangements. Horizontal linkages usually involved joint work by firms on projects to
develop a particular product or technology for short-term periods marked by clearly-defined contributions and goals. Vertical linkages normally emerged out of longer-term relationships, especially supply arrangements, where on-going innovation took place between customers, suppliers and collaborators (among whom it was frequently difficult to form clear-cut distinctions). As a result, cooperation appeared to be basic to many of the industrial relationships in certain industries, and the distinction between cooperation arrangements, supplier support and customer care were blurred (eg. in the automobile industry).

(iii) Organizational motives

Organization-oriented agreements usually took the form of long-term arrangements that were integral to the firm’s main production activities. They were used by firms unwilling to internalize the organizational costs of undertaking certain activities in-house, commonly leading to agreements for the supply of component parts and support services and for sub-contracting parts of the production process. In general, organizational motives appeared to be relatively unimportant for interfirm linkages initiated by Scottish firms. Several Scottish firms had developed supply agreements with foreign firms, in many cases including an element of technology and product development. Only 12 percent of the agreements reported in the survey had arisen directly from organizational factors, considerably less than the shares for market and technology factors (Table 2). Organizational factors were particularly important in two types of agreement: supplier agreements and production sub-contracting. Although these forms of cooperation are common in domestic linkages - especially in certain industries in Scotland such as IT - opportunities for international linkages are more limited as such linkages often develop in industrial clusters. International supply agreements and production sub-contracting involving Scottish firms appeared to be restricted to specialized industries or one-off large-scale projects (as in civil engineering).

5. Internationalization and Scottish Cooperative Strategies

For the firms in the survey, the motives behind their cooperative strategies were not mutually exclusive, but were often stages in the wider process of internationalization. 'Internationalization' can be widely defined, but effectively it involves the exposure of a domestic business to international trade. In most cases this can lead to the transformation of a business wholly dependent on domestic markets into an exporting company, but the impact of international trade could result in other effects. For example, internationalization could mean a domestic firm widening its sources of inputs and suppliers to include foreign firms, while in other circumstances, it can comprise the transfer of some aspect of a foreign business - such as product or production technology or marketing practices - to a partner firm.

In this context, the (internationalization model) developed by Scandinavian researchers in the 1970s can be applied (Johanson and Vahlne, 1977). By this model, firms internationalize in incremental stages, where deeper involvement follows with increasing experience and information regarding foreign markets. This involvement is marked by larger organizational commitments to support the firm’s presence in the foreign market, beginning at one end of the spectrum with experimental and indirect exporting, continuing with direct exporting and the use of marketing agreements, and resulting in the establishment of a wholly-owned subsidiary. With each stage, firms increase the control they exert over their foreign marketing operations and their resource risks as they become more familiar with the markets.

The model has been employed to describe the process by which domestic firms internationalize their markets. However, in considering the importance of cooperation to Scottish firms, it is useful to consider internationalization as two separate processes. Traditionally, the (internationalization model) has been applied to commercial expansion, but internationalization often continues beyond the market entry and expansion stages to include other areas of business activity, notably product development. From the interview survey, international cooperation in the areas of innovation and organization tended to follow rather than precede the formation of international market-based agreements. Consequently, in examining the use of cooperation by Scottish firms in relation to other options (such as foreign investment), it is important to distinguish between initial and progressive forms of internationalization.

(i) Initial internationalization

The initial stages of internationalization usually involves the entry into a new market. Cooperation is often the most cost-effective (or in some cases, the only low-cost) way available to
domestically-oriented firms to internationalize in this sense. From the interview stage of the project, it was clear that linkages were the preferred instrument for entering new markets, especially for firms with little or no exporting experience. They were favoured over direct exporting because they gave first-time exporters the opportunity to gain exporting experience with a minimum of risk. Moreover, they allowed firms to distribute goods and services without the costs of building up distribution networks through foreign acquisitions and new start-up investments.

Nevertheless, Scottish firms did not consider interfirm cooperation an exclusive alternative to the other options for internationalization, but rather, cooperation agreements were often used in tandem with other forms of internationalization. Firms with a foreign investment presence in Western Europe were more likely to have made cooperation agreements: in the postal survey, 45 percent of firms with existing subsidiaries had made agreements as compared to only 34 percent of firms that had not invested in Western Europe. Cooperation agreements were sometimes a preliminary to establishing a deeper presence in a foreign market, as in cases where a firm took over its foreign distributor in order control its distribution network more fully.

Cooperation was particularly important in facilitating commercial internationalization through the ability of firms to use commercial agreements to reinforce rather than replace exporting directly to customers. Their advantage over other market entry options was their ability to perform other functions apart from product sales and distribution in foreign markets. In some cases, these activities were not directly associated with the main purpose of the agreement but arose as a series of beneficial side-effects, of which the most important were their functions as 'local colour' and 'local intelligence', viz;

Local colour. Access to foreign markets was hindered by invisible barriers to trade for many Scottish firms. The most common obstacle was national preference on the part of the customers in foreign markets, especially when the customers were large organizations that habitually bought from domestic companies. Usually, the prejudice only extended to foreign companies, not foreign products, so it was possible for Scottish firms to enter markets by operating through a local company. Distribution arrangements with foreign partners could be used to acquire sufficient 'local colouring' to be able to appear local. As well as providing the equivalent of 'cover' for Scottish firms acting in foreign markets, foreign partners could often better represent Scottish firms to buyers accustomed to dealing with local firms, and consequently arrange customer contacts, organize Scottish company visits and provide foreign language support for the Scottish firm.

Local intelligence. In some markets, local knowledge was critical for successful sales, particularly in industries characterized by tenders for large orders, such as the capital equipment sectors. As a result, it was important for Scottish firms to have access to key information regarding the market, such as the timetable for new tenders in public procurement markets. Local partners could also pass on important information to the Scottish firm about the changing product preferences of their customers and pricing strategies, as well as news of the activities and product changes of local competitors.

(ii) Progressive internationalization

As well as initial internationalization by expanding into foreign markets, cooperation can be regarded in terms of the progressive extension of international resources to other business activities. As firms increase in terms of size and the assets available for cooperation, the range of agreement areas can also widen, particularly with regard to innovation. This can manifest itself through a proliferation of the number of agreements made. Our research did not focus on the development of multiple agreement strategies, but on another feature of interfirm cooperation - the tendency of certain agreements to deepen.

The majority of commercial linkages did not change substantially after their formation. Sales and distribution agreements often remained unchanged for many years, but in several cases, the characteristics of the linkages, particularly those where cooperation was more extensive from the beginning, shifted over time. Occasionally the changes undermined the original purposes of the agreements as the goals of partners diverged, often resulting in the termination of the agreements. However, changes could also lead to the linkage becoming more complex as different activities emerged from the initial cooperation between the firms.

Many linkages acquire increasing complexity over time as cooperation deepened between the partners
in the postal survey. For example, although 29 percent of surveyed firms undertook cooperation for technological and product innovation, when firms were asked about the results of their agreements, 39 percent reported their agreements had produced significant R&D outputs, suggesting that the initial motives in some cooperation agreements altered during their course. This 'deepening' of agreements was more notable among SMEs than large firms, and similarly, it was also particularly true of commercial linkages, where the experience of cooperation on issues such as supply and distribution could often provide a base for extending cooperation into other areas, such as joint product development.

Deepening cooperation generally took place between manufacturing firms in complementary industrial sectors, especially in long-term supplier arrangements. In some manufacturing industries, suppliers and customers often cooperated regularly on joint design and product development because of the nature of their industry. In general, deepening appeared to occur during periods of change in both the external and internal conditions of the initial agreement. In terms of the external environment, a deepening of cooperation was more likely to take place in sectors where there was a continuing development of new technologies or the application of existing technologies from other sectors. Similarly, in some industries, the opening-up of new markets could present opportunities for existing agreements to develop in new areas. For internal firm factors, partner complementarity was regarded as crucial, as deepening required cooperating firms to bring together complementary aspects of their business for the development of new activities. In particular, complementary technologies, products and production processes offered scope for interfirrn linkages to broaden beyond their foundations.

6. Conclusions

From the research, it is clear that Scottish businesses make substantial use of international cooperation, but the incidence of agreements is less than for firms based in more central parts of the European Union. Scottish firms are mainly domestically-oriented in terms of their markets and sources of innovation. However, cooperation agreements have been used as an important mechanism for entering and expanding in foreign markets. For Scottish firms, such commercial motives are the main reasons for developing cooperation agreements, especially for SMEs. Agreements to expand an initial market presence and to pursue R&D objectives are usually more significant for large companies rather than small firms.

Consequently, in the context of the traditional (internationalization model[, Scottish businesses use cooperation agreements as adaptable instruments for increasing their familiarity with markets and gaining export experience in preference to other internationalization options, such as exporting directly to customers and maintaining wholly-owned subsidiaries. The relationship between cooperation and internationalization goes beyond sales-related aims though, and linkages can often develop from their original marketing premises to include a wide range of innovation and organization objectives. As the pressures on Scottish companies to internationalize increase - with the greater pressures of European economic integration through economic and potentially monetary union - the flexibility of such agreements and their capacity to deepen may allow Scottish firms and companies in other peripheral areas to achieve internationalization more rapidly than has been possible with traditional strategic options.

Bibliography


European Industrial Restructuring in the 1990s, Macmillan, London.


Table 1: Types of Cooperation Agreements

Percentages of agreements by firm size

<table>
<thead>
<tr>
<th></th>
<th>Marketing</th>
<th>Production</th>
<th>Joint R&amp;D</th>
<th>Licensing</th>
<th>Training</th>
<th>Franchising</th>
<th>Any agreement</th>
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<td>12</td>
<td>18</td>
<td>0</td>
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<tr>
<td>50-199</td>
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<td>7</td>
<td>13</td>
<td>2</td>
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<td>8</td>
<td>14</td>
<td>1</td>
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<td>31</td>
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<tr>
<td>Over 200</td>
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<td>33</td>
<td>33</td>
<td>14</td>
<td>7</td>
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<td>45</td>
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<td>13</td>
<td>4</td>
<td>4</td>
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Source: Survey data.

Table 2: Motives for Cooperation

Percentages of agreements by firm size

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<th>Market entry</th>
<th>R&amp;D and product development</th>
<th>Organizational restructuring</th>
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<td>Total SMEs</td>
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Source: Survey data.