

Use of supplier-customer relationships by SMEs to enter foreign markets

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Received 4 November 2003; received in revised form 3 May 2005; accepted 17 May 2005

Available online 7 July 2005

Abstract

Small and medium size enterprises (SMEs) that have gained experience in a supplier-customer relationship with multinational companies in the domestic market may be able to leverage that relationship to recruit new customers abroad. Is it possible to internationalize such supplier-customer relationships is the research question addressed in this paper. We tested five hypotheses, derived from the internationalization and interorganizational literature, using non-parametric tests and regression analysis with data provided by customers and suppliers in the computer industry. We discover that while customers initiate the first supplier-customer relationship, additional relationships, formed with the objective of internationalizing the firm are often initiated by SME itself, a new finding.
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Keywords: Supplier-customer relationships; Internationalization; SME; International market entry; Inter-organizational linkages

1. Introduction

Is there an opportunity for smaller firms to skip stages in the organic internationalization process by piggybacking on their relationships with stronger more established local multinational firms? Many small and medium size enterprises (SMEs), especially high technology firms, are forced to internationalize early in their development due to a focus on niche markets, shorter product cycles and, frequently, the small size of their domestic markets relative to the potential that exists abroad. SMEs attempting to internationalize face a basic marketing dilemma—do they attempt to internationalize unaided or do they form a partnership with stronger firms in their business system that can help them. One such way is to internationalize as part of a supplier-customer network in partnership with established multinational firms.

Many firms have experimented with supplier-customer collaborative networks, linking numerous parties in the

business system, to respond to customer product and service preferences in myriad international markets. For example, firms that wish to sell to original equipment manufacturers (OEMs), especially in the automotive and electronics industries, must be willing and have the capability to fulfill their customers' request for close supplier-customer relationships. Indeed, the long-term relationships that suppliers have with their customers is acknowledged as a key to their performance and has become a major source of competitive advantage for both parties (Flint, Woodruff, & Gardial, 1997). This paper examines the degree to which supplier-customer relationships between SMEs and large scale OEMs may be internationalized to avail of such competitive advantages. The broad research issue addressed is: are SMEs, with a favorable attitude toward collaboration and participation in supplier-customer relationships, more likely to win additional new customers abroad? To understand this research issue it is decomposed into the following four questions:

1. Who initiates the first supplier-customer relationship between industrial SMEs and multinational partners?
2. Is it possible to internationalize supplier-customer relationships i.e. is it possible to acquire customers abroad

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using existing domestic supplier-customer relationships established with multinational firms?

3. Are industrial SMEs more likely to initiate additional supplier-customer relationships after the first one has been implemented?
4. Does an SME's attitude toward a supplier-customer relationship have an influence on the survival of that relationship?

In this exploratory research we use these questions to develop a number of hypotheses, which are tested using data drawn from the computer sub-supply industry. We discover that, in general, customers initiate the first supplier-customer relationship, which confirms findings in the literature. Suppliers however, often initiate subsequent relationships. In many cases, suppliers actively seek to establish additional supplier-customer relationships with the objective of internationalizing their business. Suppliers with a more favorable attitude toward supplier-customer relationships may be more likely to win customers abroad.

2. Internationalization of the SME

For small high technology firms, growth and development is likely to involve an international dimension (Jones, 1999). Exporting is still the primary foreign market entry mode used by small businesses in their internationalization efforts (Leonidou & Katsikeas, 1996) presumably because it offers an effective means of internationalization (Oliver, 1999) without over-extending the capabilities or resources of the firm (Young, Hamill, Wheller, & Davies, 1989).

Some authors argue that small firms pursue internationalization through a series of progressive stages (Anderson, 1993; Bilkey & Tesar, 1977). The stages framework, however, provides limited understanding of the internationalization of small firms as many must be international from the outset (Oviatt & Philipps McDougall, 1994) and may not be able to wait for stages to evolve. This has intuitive appeal especially in smaller open economies of Europe and Asia. Furthermore, international expansion through the conventional, incremental export development route is not the sole mode of international development for small high technology firms (Jones, 1999). In the firms studied by Crick and Jones (2000) there is evidence of an international orientation from the date they were founded, a rapid planned internationalization through several modes of market entry and a concentration on major markets through committed forms of entry strategy, such as subsidiaries. The internationalization process in high technology firms is, therefore, much less deterministic than suggested by the conventional wisdom of the stages models.

3. Establishing the first supplier-customer relationship

For SMEs engaged in exporting it is not the quantity but the nature of the resources available that determines a firm's competitive action (Wolff & Pett, 2000). Internationally experienced management, whatever its source and contractual obligations, is a key ingredient in early internationalization of small firms (Reuber & Fischer, 1997). Firms use available managerial and organizational competencies to serve several markets rather than relying on a few key markets only (Crick & Jones, 2000). Hence, access to a key resource, internationally experienced managers, may allow small firms to compete effectively in international markets, a domain heretofore deemed better suited to larger firms (Wolff & Pett, 2000). Given the appropriate type of resource, which may be available in a supplier-customer relationship within a business system, a small firm can mimic the competitive patterns used by larger firms and may perform as effectively.

The literature, however, has ignored this possibility and has dealt primarily with the power large firms have over small firms in supplier-customer relationships (Leavy, 1990). It is relatively easy, moreover, for large-scale OEM customers to end the relationship with the supplier and switch to a competitor. This would weaken the supplier's position decisively because it jeopardizes not only a large share of its turnover but also, a prestigious customer is lost, which has adverse effects when tendering for new business. For this reason small firms attempt to ensure that supplier-customer relationships are reciprocal in nature, thus avoiding asymmetrical dependence upon the relationship (Anderson & Weitz, 1989), a dependence which allows the more powerful party to take advantage of the dependent one (Ganesan, 1994).

The literature on supplier-customer relationships deals almost exclusively with the customers' perspective (Fawcett & Birou, 1992; Holland, Locket, & Blackman, 1992; Monczka & Carter, 1988). Recognizing this limitation Macbeth (1994) calls for 'a more complete recognition of the two-way nature and responsibility of the partnering relationship'. In acknowledging this limitation Brennan (1997) shows that there are many costs and benefits from partnering for the customer and the supplier but only benefits have been examined extensively. For major OEMs, establishing a supplier-customer relationship provides a competitive advantage because it reduces the overall cost of the final product. Indeed, single sourcing may bring both higher quality and lower costs to the customer (Larson & Kulchitsky, 1998).

The benefits of closer customer relationships are unambiguous for the SME-reduced overheads and improve manufacturing efficiencies (Kalwani & Narayandas, 1995), higher sales volumes, longer-term business agreements, more accurate advance information on product requirements, and prompter payments (Giunipero & Brewer, 1993; Akacum & Dale, 1995) but of greatest value to suppliers is

the support customers can give them in acquiring new business abroad (Paliwoda & Bonaccorsi, 1994). Sometimes this may be achieved as a result of a two-way interaction, building relations with foreign firms thereby providing opportunities to learn about the ‘nuts and bolts’ of foreign activities that may in turn help form an important platform for subsequent outward operations (Karlsen, Silseth, Benito, & Welch, 2003).

The issue to be examined is, therefore, whether SMEs can use the investment in know-how and equipment accumulated in dealing with OEMs in the domestic market to win new customers, either at home or abroad, and thus internationalize the relationship. Central to this issue is the question whether customers initiate supplier-customer relationships, as the literature suggests, or whether there are also pro-active suppliers.

OEMs have been at the forefront of initiating and implementing supplier-customer relationships (Harrison, 1992; Monden, 1983; Blenckhorn & Noon, 1990; O’Neal & Bertrand, 1991; Mackay & Rosier, 1996). Large OEM customers are more likely to initiate the relationship as they are mainly interested in minimizing the risk from single- or dual-sourcing (Sinclair, Hunter, & Beaumont, 1996). These customers use ‘their purchasing muscle to force their suppliers to adopt certain quality management techniques and practices, as a contractual condition of business’ (Lascelles & Dale, 1989) and customers in some situations force their suppliers to implement forms of supplier-customer relationship (Zipkin, 1991).

Suppliers seldom take a proactive stance in initiating or implementing a supplier-customer relationship (Bertrand, 1986). They concentrate rather on complying with customers’ requirements to remain in the shrinking supplier base. Few writers, Schonberger (1986), O’Neal and Bertrand (1991) and Kalwani and Narayandas (1995) excepted, suggest that suppliers benefit from maintaining long-term relationships with their customers compared to employing a transactional approach. This literature suggests, therefore, that in most situations customers initiate supplier-customer relationships, but the question remains—to what extent are SME suppliers willing to initiate further supplier-customer relationships because of the potential to indirectly internationalize their activities?

The long-term nature of the link and the opportunity to grow with the customer are reasons often cited for preferring supplier-customer relationships over the more traditional adversarial exchange relationships (Akacum & Dale, 1995; Mattsson, 1985). As the perceived opportunities become more apparent, the supplier is expected to invest more in flexible machines, quality assurance and CAD equipment and so on, to be ready for potential customers (Matthyssens & Bulte, 1994; Mattsson, 1987). Such investment leads to strong links between the firms in the first supplier-customer relationship (Monczka, Callahan, & Jr., 1995), both feeling confident that the relationship will be long-term and each thus effecting

significant resource adaptations. New customers often require new suppliers to have verifiable supplier-customer relationship capabilities that conform to international standards. For these reasons it is expected that longevity of relationships may be an issue in bonding suppliers and customers together—older supplier-customer relationships reflect a situation of more contented partners. The first hypothesis to be examined is:

H1. There is a positive association between an SME’s attitude toward supplier-customer relationships and the longevity of the relationship.

4. Entering additional supplier-customer relationships in domestic markets and abroad

Continuous interaction between two parties constitutes the relationship through which they share and create resources. Cooperation between firms who feel they are important to each other is a salient feature of such relationships (Håkansson & Snehota, 1989; Johanson & Mattsson, 1987; Mattsson, 1985). Customers and suppliers proceed through a series of steps in forming such supplier-customer relationships (Dwyer, Schurr, & Oh, 1987) which may affect the outcome of the balance of benefits. Trust and cooperation are critical during the initial stages of the relationship, while commitment, dependence and information exchange become more important later in the relationship (Johnson et al., 1999). These elements thrive as the relationship between suppliers and customers survives and becomes established.

Empirical evidence for these theoretical arguments is difficult to find mainly because so little research is available on the effects of supplier-customer relationships on suppliers (Vonderembse, Mark, Tracey, Tan, & Bardi, 1995; Wafa, Yasin, & Swinehart, 1996). Anecdotal evidence suggests that decision-makers in some supplier firms cherish supplier-customer relationships and, as a consequence, hold their counterparts in customer firms in high regard. In such circumstances, it is reasonable to assume that social and administrative bonds are stronger than in situations where suppliers have the opposite experience (Powell & Smith-Doerr, 1994). Suppliers with a more favorable disposition towards supplier-customer relationships, after the first one has been implemented, will have developed stronger bonds with the first customer than will other suppliers. If such a link between longevity and bonding exists the length of experience may be positively correlated with the formation of additional supplier-customer relationships. The second hypothesis is:

H2. There is a positive relationship between an SME’s attitude towards supplier-customer relationships and the strength of supplier-customer bonds.

The history of the first supplier-customer relationship may influence possible additional relationships (Håkansson & Johanson, 1988; Mattsson, 1987). A negative experience occurs when the customer uses the relationship mainly to exploit the supplier, requiring, for example, higher quality levels or more frequent deliveries without compensating the supplier in some way. Some authors, Schonberger (1986) among them, implicitly warn against the attitudinal consequences of exploiting suppliers. A positive experience occurs when the supplier develops a favorable attitude towards the relationship because of unambiguous benefits, thereby providing a stronger motivation to implement additional supplier relationships (Bertrand, 1986; Burt, 1989). If the customer shares the advantages achieved through closer cooperation, in line with relationship rhetoric, the supplier can be expected to perceive greater benefits than costs in a supplier-customer relationship. Suppliers with a favorable attitude towards supplier-customer relationships after the first one has been implemented are likely, therefore, to be more motivated to enter new relationships than will suppliers with an unfavorable attitude.

Once the first supplier-customer relationship is successfully in place, therefore, there is a higher probability of additional relationships being established. Having formed one relationship the firm considers whether additional supplier-customer relationships are appropriate given its current and intended position in the business system. Having implemented the first supplier-customer relationship, the SME forms an attitude, positive or negative, toward supplier-customer relationships in general. It is likely that should that attitude be positive that the SME would be motivated to enter additional supplier customer relationships. The third hypothesis to be examined is:

H3. There is a positive relationship between an SME's attitude towards supplier-customer relationships and the SME's motivation to enter additional relationships in the domestic market.

A favorable attitude means decision-makers perceive the actual and potential benefits of closer cooperation for their own companies. They are likely to invest more in the implementation process, thereby accumulating resources on which they can confidently base their sales proposals when they approach new customers. Favorably disposed SMEs should have more supplier-customer relationship customers than suppliers with less favorable attitudes. The fourth hypothesis to be tested is:

H4. There is a positive relationship between an SME's attitude and the number of its supplier-customer relationship customers.

Suppliers initiate additional supply chain relationships because they wish to ensure their survival by staying competitive in an increasingly global industry. Enjoying access to markets gained through a supplier-customer

relationship may lull an organization into complacency and prevent the firm from searching out new markets for its products (Morgan & Hunt, 1999). For this reason the survival motive may be behind the drive to broaden the customer base. One of the few ways for the SME to reduce its dependence on buyers in the domestic market and thereby broaden its customer base, especially in small country markets, may be to enter international supplier-customer relationships and thus further increase the volume of business.

Another reason for trying to win additional customers, domestically or abroad, is the need to spread investment costs associated with the first relationship. Resources created in this process can be quite specialized to achieve a good match and strong bonding between the two partners in the supply chain relationship. A way to put the resources to additional use is to establish new relationships. It may be, however, that suppliers who are reluctant to let relationships develop too far, fear that such bonding may limit their flexibility and heighten their vulnerability, while customers for their part may effectively use relationships to create flexibility by leveraging the supplier's resources and shifting investment burdens to the supplier (Morris, Brunyee & Page, 1998).

Behind H5 is the presumption that a positive attitude toward supplier-customer relationships indicates support from current customers in the domestic market and also indicates benefits of performance enhancing investments. Prospective customers abroad are presumed to stress the value of observing existing effective supplier-customer relationships in the domestic market and the recommendations of existing customers within these supplier relationships. The fifth hypothesis to be tested is:

H5. There is a positive relationship between an SME's attitude towards supplier-customer relationships and the likelihood of winning new customers abroad.

5. Methodology

5.1. Research context and characteristics

Since supplier-customer relationships between multinational OEMs in the computer industry and their indigenous suppliers in countries where they locate were quite common, this industry was chosen as the research site. Furthermore, as Ireland had become a vibrant production location for the world's largest computer hardware and software manufacturers it was the country location selected. By choosing one industry in one country, industry and country effects were controlled thereby allowing the focus to rest on the supplier-customer relationships.

Given the nature of the hypotheses it was necessary to study both sides of the supplier-customer relationship;

the customer and the supplier. Integrating the information from both parties of a relationship has not often been attempted. Much previous research is almost exclusively based on qualitative case studies. Here a more quantitative methodology was used in order to measure the effects of supplier-customer relationships for populations of firms on both sides of the partnership.

5.2. *Constructs and their measurement*

A description of the variables how they were measured is shown in Appendix Table 1. The relevant literature provided a set of validated scales for use in the questionnaire. In a number of cases, due to the absence of existing scales, it was necessary to develop customized scales which were validated by testing and refining them first with fellow-researchers, then with representative trade bodies and finally with managers of firms that were not part of the sample. In all cases five-point Likert scales instead of seven-point scales were used to make answering easier for respondents. Additionally, it could be argued that seven-point scales would feign a spurious degree of accuracy that did not actually exist.

The criterion variable in this study, attitude toward supplier-customer relationship (*Attitude*), was measured on a five-point scale using twelve statements seeking agreement with the statement. The length of the supplier-customer relationship (*Length of S-CR*) was based on the number of years experience the supplier had with the first customer in the relationship. The construct for motivation to enter new S-CRs after entering the first one (*Motivation*) included ten elements, such as ‘we would need more finance’, ‘more machines would be needed’ etc. The strength of bonds (*Bonds*) measure consisted of ten investment items on staff training, quality-monitoring equipment, quality improving processes etc. The variable *Customers* represented the number of customers in a supplier-customer relationship. The variable ‘winning new customers abroad’ (*Customers Abroad*) was based on the question ‘How many customers abroad have you acquired due to participating in a supplier-customer relationship?’

5.3. *Sample*

As there existed only small populations of customers and suppliers in the computer industry in Ireland, it was deemed necessary to obtain the cooperation of the population of supplier and customer firms. International computer OEMs represented the customer base for the study. There were seven OEM customers in the computer industry in Ireland, all of them high profile and well known international household names. It was with a high degree of confidence that the entire population of customer firms was identified. Though few in number,

international computer OEMs constituted the population of customer firms used in the analysis.

All supplier firms in the research population were small-scale indigenous suppliers to the computer industry. Verifying the membership of the suppliers in the research frame proved to be difficult due to the contradictory secondary information available. To improve confidence in the supplier data, the customer population was asked to identify additional suppliers to ensure completeness. After adding suppliers that were identified by customer firms the research frame for the supplier firms consisted of 51 companies. Ten of these firms, initially considered to be part of the frame, were eliminated during the telephone call stage or at the interview stage because they did not fit the definition for membership. As a result, 41 firms were identified in the supplier population. Almost without exception the respondents in the supplier population were managing directors, senior managers, or the owners of the business.

Personal interviews using two separate structured questionnaires, one for customers and one for suppliers, formed the basis of the data collection process in all but one case. The exception was a customer firm that provided the information by telephone, using the questionnaire as a guide, as the responding manager was too busy to meet the researcher. In general interviews lasted between one and three hours depending on the extent of ‘rapport’ developed with the respondent.

Given the nature and size of the population, a structured personal interview was considered the most appropriate data collection method. Personal interviews also made possible the provision of a wealth of qualitative information surpassing that of other techniques. Our study is similar to the (Hines, 1995) study which involved the interactions between eight customers and 36 suppliers in Japan and for the same reason it is also similar to the study carried out by Landeros, Reck, and Richard (1995).

5.4. *Profile of the respondent firms*

All customer firms participated in the study. The respondents among customer firms were senior purchasing managers with the knowledge and experience required to give accurate answers. Four of the 41 suppliers refused to be interviewed. Without exception supplier respondents were managing directors, general managers or marketing directors. A profile of respondent companies, suppliers and customers, and data on companies that declined to be interviewed, showing that they are not significantly different from the firms that participated in the study, is shown in Appendix Table 2. One of the four firms that did not participate in the survey claimed confidentiality risk while another refused to cooperate on a newly established principle of not cooperating in surveys. The remaining two firms declined without giving a reason.

6. Results

6.1. General findings

In Appendix Table 3-Part A it is shown that ISO, SPC, JIT, and STS were the supplier-customer relationship elements most frequently sought by customers. In contrast, three customers only sought TQM, two customers wanted their suppliers to have EDI, and none required CAD unconditionally. Customers also reported, however, that they requested EDI for high-volume purchases, or CAD for components easily designed by suppliers, such as specialized sheet metal. Length of experience with supplier-customer relationships differed considerably; seven suppliers had less than five years experience, 19 firms had between six and ten years and a further seven suppliers had between 11 and 16 years experience (Appendix Table 3-Part B). For 17 suppliers, the probability of establishing long-term (more than five years) supplier-customer links with customers was high (between 61 and 90 percent) after initiating the first one (Appendix Table 3-Part C).

The adaptations made by suppliers and customers in six separate categories in establishing the first supplier-customer relationships is shown in Appendix Table 3-Part D. In each category the first column shows the frequencies of supplier responses and the second column presents customer responses. In only one kind of adaptation did four or more customers effect a major change: logistical systems. Very few customers required changes in respect of products, processes, and information systems. Suppliers, however, reported making major changes particularly to their products and administrative routines. In comparison, their information systems generally underwent only minor adaptations.

Most suppliers (31) agreed that the first experience of implementing a supplier-customer relationship was important for winning customers in the domestic market while 28 suppliers agreed or strongly agreed that it was important for winning customers abroad (Appendix Table 3-Part E).

6.2. Initiating supplier-customer relationships

Data drawn from the supplier and customer questionnaires were used to determine who initiated the supply chain relationship. As may be seen from the supplier data, 27 of the 37 suppliers (73%) reported that the customer initiated the supplier-customer relationship. In the case of the customer data, 4 of the 7 customers responded that it is either always true or true in most cases that customers initiated the supplier-customer relationship. These

findings are consistent with expectations arising from the literature (Table 1).

As initiating additional supplier-customer relationships is of central interest in this paper it was also necessary to examine to what extent suppliers attempt to initiate additional supplier-customer relationships after the first one is successfully established. Data from both questionnaires were used. In regard to this question, one supplier did not respond so the analysis is based on 36 responses. The vast majority of suppliers (29 of 36 or 81%) attempted to initiate a supplier-customer relationship with other customers after the first one. In the case of the customer data, 4 of the 7 customers reported that it is true in most cases that suppliers usually approach other customers to initiate a relationship after establishing the first one. The findings are in line with expectations from the literature (Table 1).

6.3. Attitude, bonds and motivation

The data analysis for this part of the study was carried out in two stages. First, as the constructs *Attitude*, *Bonds* and *Motivation* consisted of a number of mixed items, factor and reliability analyses were conducted. These factor scores were saved for the second stage of the analysis, where a series of separate multi-linear regression analyses were performed. Other forms of regression analysis were considered but as the model was highly specified it was not deemed necessary to use other forms, in the circumstances, such as step-wise regression.

Exploratory factor analysis was applied to each of the constructs *Attitude*, *Bonds* and *Motivation*. Factors were extracted through principal components analysis and varimax rotated, and the number of factors was determined by examining eigenvalues, with 1.00 as a cutoff (Hair, Anderson, Tatham, & Black, 1998). We present the results of the factor analysis with varimax rotation and reliability measures of the multi-item scales for the three constructs in Table 2.

Four factors with eigenvalues greater than one were derived from the factor analysis of the twelve attitude items. These four factors explain 68.32% of the variance among the items, and there is no significant overlapping of items among factors. In Table 2, we present the rotated variable loadings for each item. The first factor represents 'Customers'; the second factor is 'Implementation'; the third factor is 'Initiation'; the last factor is 'Communication'. The factor scores were saved for use in the regression analysis. A factor analysis of the ten items used to measure strength of bonds produced two factors with eigenvalues greater than one, which explains 81.59% of the variance among the items (Table 2). Factor 1 is 'Equipment' and Factor 2 is 'Quality'. A factor analysis of the

Table 1
Findings on supplier-customer relationship initiation

	Supplier questionnaire (37)	Answer		Customer questionnaire (7)	Answer	
		Yes	No			
Initiating supplier-customer relationships	The S-CR was initiated by customer	27	10	We initiate the implementation of a S-CR with a supplier who hasn't participated in a S-CR before	Always true True in most cases Often true Sometimes true	2 2 1 2
Some suppliers try to initiate S-CR after the first one is in place	Did you try to initiate a S-CR with any other customers after the first one?	29 Missing	7 1	After a supplier has introduced the first S-CR the supplier usually approaches other customers to initiate S-CRs with them	Always true True in most cases Often true Sometimes true	0 4 1 2

Table 2
Varimax rotated factor loadings: attitudes, bonds and motivation

Attitude items*	Customers	Implementation	Initiation	Benefits
Customer advantages only	0.742			
Skills to win new customers in the home market	0.814			
Skills to win new customers abroad	0.725			
Better chance of winning the parent or sister firms as customers abroad	0.665			
Customer provided advice by sending specialists to our plant.		0.927		
Customer provided staff training by sending specialists to our plant.		0.911		
No supplier initiates S-CRs			0.802	
Only customers initiate S-CRs			0.789	
S-CRs increase supplier's dependence on the customer			0.744	
Suppliers accept S-CRs to avoid losing customers.				0.804
Suppliers become more efficient in an S-CR				0.573
S-CRs improve communication with the customer				0.731
Bond items**	Equipment			Quality
Quality monitoring equipment	0.732			
Logistics/production reorganization measures	0.732			
Information flow equipment	0.974			
Machines	0.974			
Product design	0.974			
Improved materials specifications	0.942			
Staff training				0.956
Quality improving processes				0.956
Reorganization of quality systems/procedures				0.956
Other				0.732
Motivation items***	Resources	Growth	Organization	Relationships
We would need more finance	0.692			
More machines would be needed	0.830			
Gain competitive advantage over national competitors	0.667			
We would grow in size		0.869		
We would employ more people		0.864		
Our company would need improved and expanded R and D facilities to cooperate closely with the customers			0.770	
Firm's organizational structure would have to change			0.632	
Our time would become more controlled by our clients			0.756	
It would be necessary to implement SCRs with our suppliers				0.816
The S-CR would endanger sales to other customers because the firm would not be able to give them the same attention.				0.632

* Rotation converged in 5 iterations. Cronbach's alpha=0.654.

** Rotation converged in 3 iterations. Cronbach's alpha=0.842.

*** Rotation converged in 24 iterations. Cronbach's alpha=0.738.

ten items used to measure motivation produced four factors with eigenvalues greater than one, which explained 74.56% of the variance among the items (Table 2). Factor 1 refers to 'Resources', Factor 2 represents 'Growth'; Factor 3 is 'Organization' and Factor 4 refers to 'Relationships'.

Cronbach's alpha was calculated to test the reliability measures of the multi-item scales: scores ranged from 0.654 (*Attitude*), 0.842 (*Bonds*) to 0.738 (*Motivation*). As the generally agreed lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research, the above results indicate an acceptable reliability of the three constructs (Hair et al., 1998).

6.4. Hypotheses testing

Before performing a multiple regression analysis, the issue of multicollinearity was considered. The measures of multicollinearity include Inflation Factor (VIF), Tolerance, and Eigenvalues and

Condition Indexes (Hair et al., 1998; Norusis, 1990). Condition Indexes provided in the SPSS program were computed among all the independent variables. Table 3 shows that only two variables

Table 3
Multicollinearity diagnostics

Variables	Condition Index
Length of SCR	2.050
Bonds-equipment	3.858
Bonds-quality	3.633
Motivation-resources	2.116
Motivation-growth	2.211
Motivation-organization	2.214
Motivation-relationships	3.484
Customers	15.930
Customers abroad	18.474

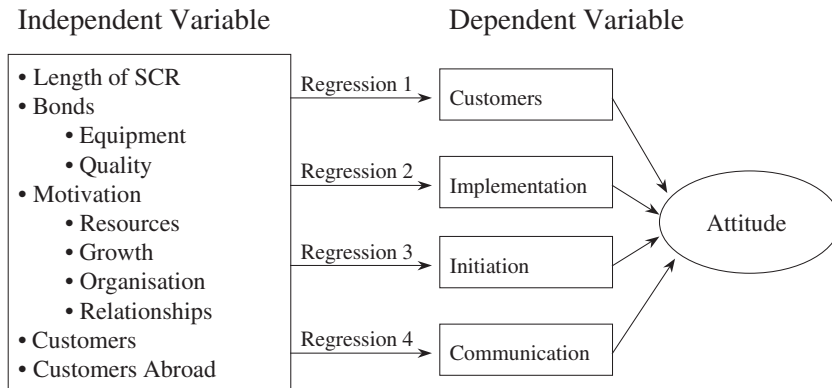


Fig. 1. Multivariate regression model.

Customers and *Customers Abroad* had relatively large condition indexes, which was not surprising since the number of customers is related to acquiring customers abroad. But the two variables were not so strongly correlated ($r=0.36$, $p<0.10$) that would cause a multicollinearity problem in the whole model.

Four separate multilinear regressions were conducted with each dimension of the variable *Attitude* as the dependent variable. The model is illustrated in Fig. 1. The regression results support four of the five hypotheses (H1, H2, H4, H5), while H3 was weakly supported (Table 4). H1 was related to the length of supplier-customer relationship and supplier attitudes. The coefficients for the variable *Length of SCR* were significantly positive in regressions 3 and 4 at the 0.01 and 0.10 levels respectively. There is some support, therefore, for H1. H2 was strongly supported since *Bonds* (equipment dimension) showed a significant positive relationship with *Attitude* in three of the four regressions, while the

quality dimension showed a significant positive relationship in regressions 3 and 4.

By the same logic, in H3 we examined the four dimensions associated with *Motivation*. The first dimension showed a positive relationship with the dependent variable in regressions 2 and 3 at the 0.01 and 0.10 levels but the other three dimensions were only significantly related to *Attitude* in one of the four regressions. The association between *Customers* and *Attitude*, as described in H4, was significantly positive in regression 3 and 4 at the 0.05 and 0.10 levels. Lastly, H5, stating that a more favorable attitude toward supply chain relationships would more likely win new customers abroad, was supported in the model, as the parameter estimates were positive and significant in regressions 1 and 2 at the 0.10 and 0.05 levels respectively. We were surprised that there was only weak support for H3. It may have been that respondents interpreted the question in different ways, some concerned with the likelihood

Table 4
Regression models

	Attitude			
	Customers	Implementation	Initiation	Benefits
	Regression 1	Regression 2	Regression 3	Regression 4
Constant	−1.67	−0.93	0.94	−1.33
Length of SCR (H1)	4.75 (0.42)	7.23 (0.21)	2.73 (0.01)*	9.22 (0.07)**
Bonds (H2)				
-Equipment	0.30** (0.07)	0.30** (0.09)	1.41* (0.00)	0.31 (0.40)
-Quality	1.14 (0.98)	0.18 (0.73)	1.27*** (0.03)	0.72** (0.10)
Motivation (H3)				
-Resources	0.27 (0.70)	0.52* (0.01)	0.24** (0.10)	0.81 (0.71)
-Growth	−0.10 (0.63)	2.12 (0.91)	0.17 (0.38)	0.24 (0.08)
-Organization	−2.84 (0.80)	0.22 (0.26)	0.16 (0.42)	0.26 (0.10)
-Relationships	−0.10 (0.61)	2.57 (0.89)	0.27** (0.10)	−0.16 (0.34)
Customers (H4)	0.47 (0.24)	0.59 (0.90)	0.84*** (0.03)	0.41** (0.09)
Customers Abroad (H5)	0.68** (0.09)	0.82*** (0.04)	0.27 (0.46)	0.55 (0.90)
Model Summary				
R^2	0.43	0.48	0.52	0.50
R^2 Adjusted	0.17	0.23	0.30	0.26
Std. Error of the Estimate	0.90	0.87	0.85	0.75
F	1.61	1.93	2.31	2.11
Sig.	0.10	0.10	0.04	0.05

p values are in parentheses.

* $p<0.01$.

** $p<0.10$.

*** $p<0.05$.

of a particular outcome while other were more concerned with its desirability. For example, the possibility of ‘growth in size’ may be welcomed by some while being undesirable by others. This explanation indicates that there may have been a validity issue arising from the question used. The strong support for H4, however, provides indirect support for H3, as more relationships have been initiated subsequently for which overwhelming motivation is likely to have been a pre-requisite.

The R^2 values obtained in each regression meet the minimum requirement that a sample size of 33 could detect as statistically significant at the 0.05 level with a statistical power of 0.80 (Hair et al., 1998, p.165). The adjusted R^2 values were also acceptable. The four multiple regressions were all statistically significant at the 0.10 or 0.05 levels. Taken as whole, we conclude that the data fits the model.

7. Discussion and conclusions

This research contributes to marketing knowledge in two ways. First, the research is based on a combination of qualitative research and a quantitative study of the internationalization process of SMEs. Second, the research inquired into two distinct populations of subjects, customers and suppliers, linked by a specific type of commercial relationship. These two features have conceptual and managerial implications.

7.1. Conceptual contribution

The conceptual contributions of this research arise from combining two research directions ‘the internationalization of the firm’ and ‘inter-organizational relationships’. The initiation of the first supplier-customer relationship strongly influences how the company evaluates similar opportunities later. One important aspect in this regard is the identity of the initiator of the first supplier-customer relationship; the customer or the supplier. The initiation experience has an effect on the supplier’s attitude towards supplier-customer relationships, subsequently.

The concept ‘attitude towards supplier-customer relationships’ is new in the context of the internationalization of SMEs. While the role of attitude in the internationalization process of SMEs has been extensively studied previously, the notion is new, however, that SMEs can launch themselves into foreign markets through the internationalization of supplier-customer relationships established with large-scale multinational firms located in the domestic market.

Another conceptual contribution emanating from this research is ‘strength of bonds’. Bonds have received much attention in the literature, but more as descriptive concepts rather than as operationalized variables or constructs. The present research is quite different in this respect. Not only is there an attempt in this research to find measures for the different types of bonds as well as for all of them taken together, but there is also a suggestion that the variable

should be put to dual use—hypotheses testing and description. By emphasizing bonds in such a way, other related concepts may also be discovered in the limelight.

One of these may be investment and particularly its cumulative nature. Investments often build one on another, increasing a firm’s options for offering new products and services. By strengthening bonds with customer firms in this way, suppliers may develop the means for making a credible bid to recruit new and especially new foreign customers, when the opportunity arises.

Length of experience and number of close supplier-customer relationships are determinants of the attitude variable. Linked to this issue, in a general sense, is the idea of soliciting the support of existing supplier-customer relationship customers to aid the internationalization of the firm.

7.2. Managerial implications

If suppliers learn to work according to internationally established and accepted ‘rules of the game’ associated with supplier-customer relationships in their home markets they may be able to mobilize resources created at home and use them effectively to build and continue new business relationships with existing and new multinational companies abroad. Proceeding in this fashion may involve:

- Stronger and more elaborate linkages between a domestic firm and the affiliates of multinationals located in the domestic market,
- Using this base of relationships to win sub-supply contracts from the international divisions of multinational companies that have operations in the domestic market, and
- Developing the sub-supply capability of the domestic firm sufficiently to win stand-alone export contracts from wholly autonomous international companies located abroad.

Working closely with well established multinational companies that are well organized and have accumulated extensive knowledge of markets may provide the smaller partner with opportunities to learn best practice in the field. The demonstration effect whereby the larger multinational customizes its offering can be very instructive for the smaller firm. Indeed, for the larger company, attachment to a smaller firm often brings the promise of a guaranteed, high quality supply of components customized precisely in terms of design, delivery timing and specification.

Supplier-customer relationships are particularly appropriate for small high technology firms that decide to internationalize early in the life cycle to obtain international competitive advantage, or are forced to internationalize because of a small domestic market. By forming a partnership with well-known multinational companies the SME can leverage the MNE’s assets to gain access to markets abroad.

In this way the SME can speed up foreign market entry especially where life cycles are short and competitive market entry is threatened.

The MNE, mainly interested in minimizing the risk associated with single or dual sourcing, is usually the first to initiate a supplier-customer relationship, motivated by the known competitive advantages that ensue to both parties from such relationships. The experience of international markets thus obtained allows the SME to overcome the perceptual and other barriers to entry to subsequent international markets. Stronger bonds are developed between the partners leading to longevity in the relationship which in turn leads to additional supplier-customer relationships.

To prevent opportunistic behaviour on the part of the larger multinational firm, due to its relative power, it is necessary for the smaller firm to ensure that the benefits of supplier-customer relationships are reciprocal to ensure that asymmetrical dependence upon the relationship is avoided; a dependence which may allow the more powerful MNEs to take advantage of the dependent SME.

The benefits of close supplier-customer relationships are unambiguous for the SME—reduced overheads, higher and guaranteed sales volumes in the domestic market, new sales abroad, longer term business agreements and more accurate and prompt information on product requirements. For the OEM, establishing a supplier-customer relationship provides a competitive advantage because it reduces the overall cost of the final product and quality may be higher.

Having implemented the first supplier-customer relationship, the SME forms an attitude, positive or negative, toward supplier-customer relationships in general. Should that attitude be positive it is likely that the SME will be motivated to enter additional supplier-customer relationships. Winning new customers abroad spreads the investment costs associated with the first relationship. Resources thus created can be quite specialized and valuable; new relationships spread the benefits.

7.3. Limitations of the study

As this is an exploratory study there are a number of limitations that should be addressed in future research. First,

while there is statistical support for the hypotheses formulated, the results are based on a study of 37 suppliers and seven customers in a narrow industry sector in a small though very open international economy. Furthermore, while the data were drawn from populations of firms, consideration may in the future be given to replicating the study in a more general arena of industries and countries, which would improve the generalizability of the results. The relevance of the findings to the debate on the internationalization of SMEs based in larger markets may be worth examining. Furthermore, while supplier-customer relationships may be important in the computer industry and the electronics industry generally, they may not be universally sought as modes of foreign market entry, though anecdotal evidence would suggest otherwise.

7.4. Conclusions

In a general sense customers and suppliers in the present study proceed through a series of steps that appear to correspond to the Dwyer et al. (1987) relationship formation process. As the parties concerned explore and expand their relationship (Comer & Zirger, 1997) through deeper bonding and the formation of additional supplier-customer relationships, they establish sequentially more structured and formal relationships some of which are likely to deepen the firm's commitment to supplier-customer relationships and international markets. Specifically, we arrive at three major conclusions. First, the supplier's attitude to supplier-customer relationships depends on the length of experience—longer experience leads to a more positive attitude. Second, while customers initiate the first supplier-customer relationships, suppliers with a more favorable attitude toward such relationships, after the first one has been established, are more likely to enter additional supplier-customer relationships than are suppliers with less favorable attitudes. Lastly, suppliers who form favorable attitudes toward supplier-customer relationships in the domestic market are more likely to establish relationships with large multinational customers leading them to acquire new customers abroad.

Appendix A

Table 1
Constructs and their measurement

1. Attitude toward supplier-customer relationships (Attitude)

Using a 5-point scale: 1) strongly agree; 5) strongly disagree

1.-Customers

Customer advantages only

Skills learned from S-CR customer can be used to acquire new customers in the home market.

Skills learned from S-CR customer can be used to acquire new customers abroad.

Better chance of acquiring the parent or sister firms as customers abroad.

2.-Implementation

Customer provided advice by sending specialists to our plant.

(continued on next page)

Appendix A (continued)

Customer provided staff training by sending specialists to our plant.

3.-Initiation

No supplier initiates S-CRs.

Only customers initiate S-CRs.

S-CRs increase supplier's dependence on the customer.

4.-Communication

Suppliers accept S-CRs to retain customers.

Suppliers become more efficient in an S-CR.

S-CRs improve communication with the customer.

II. Longevity of the supply chain relationship (Length of S-CR)

The number of years experience the supplier had with the supplier-customer relationship

III. Strength of bonds with S-CR customers (Bonds)

During the implementation of the S-CR with S-CR customers, we invested in the following areas in order to develop the relationship with customers:

Using a 4-point scale, 1) we invested much more; 4) we invested nothing

1.-Equipment

Quality monitoring equipment

Logistics/production reorganization measures

Information flow equipment

Machines

Product design

Improved materials specifications

2.-Quality

Staff training

Quality improving processes

Reorganization of quality systems/procedures

Other

IV. Motivation to enter new S-CR after the first one (Motivation)

If your firm decided to implement additional S-CRs with customers, to what extent would the following occur?

1.-Resources

We would need more finance.

More machines would be needed.

We would gain a competitive advantage over competitors in the domestic market.

2.-Growth

We would grow in size.

We would employ more people.

3.-Organization

Our company would need improved and expanded R and D facilities to cooperate closely with customers.

The organizational structure of the firm would have to change.

Our time would become more controlled by our clients

4.-Relationships

It would be necessary to implement S-CRs with our suppliers.

The S-CR would endanger sales to other customers because the firm would not be able to give them the same attention.

V. The number of S-CR customers (Customers)

Number of supplier-customer relationship customers

VI. Acquiring new customers abroad (Customers Abroad)

How many customers abroad have you acquired due to participating in a supplier-customer relationship?

Appendix B

Table 2

Characteristics of supplier and customer population

Supplier characteristics	Min. score	Suppliers mean	Max. score
Respondents* (37)			
Employees (No.)	14	84	500
Sales turnover (£ million)	0.3	4.4	23.0
Years in business	2	13	34
Foreign sales (%)	0	—	81–90
Sales to customers in supplier relationship (%)	1–10	—	100

Appendix B

Supplier characteristics	Min. score	Suppliers mean	Max. score	
Non-respondents** (4)	Firm 1	Firm 2	Firm 3	Firm 4
Employees (No.)	45	50	100	180
Sales turnover (£ mfsillion)	1.5	–	–	20–100
Years in business	9	26	16	7
Foreign sales (%)	50	–	24	high
Supplier relationship performance	good	–	good	good

Customers characteristics	Customers						
	A	B	C	D	E	F	G
Year established in Ireland	1978	1980	1991	1973	1989	1980	1989
Corporate HQ	USA	USA	USA	USA	Japan	USA	USA
Business outside Ireland (%)	100	95	n/a	n/a	100	n/a	n/a
Employees (No.)	560	850	300	1000	250	378	n/a
Product	Mainframe computers	PCs, Laptops	PCs, Laptops	Mainframe computers	Printers	PCs	Mainframe computers
Year 1st relationship with supplier established	1987	1988	1991	1990	1989	1982	1989

*Suppliers of turnkey services (documentation), packaging materials, printing services, screen printing.

**Suppliers of plastic moulded parts, sheet metal, cables (harnesses), turnkey services (documentation), printed circuit boards, packaging materials, printing services, screen printing.

Appendix C

Table 3

General findings: profile of firms studied

Part A: Supplier-customer relationship required by the customer		Part B: SME's experience with supplier relationships		Part C: Probability of establishing long-term supplier-customer relationship with customers	
Supplier relationship system	Customers(No.)	Years	Firms (No.)	Probability	Frequency
TQM	3	1–5	7	<30%	5
ISO	6	6–10	19	31–60%	8
SPC	5	11–16	7	61–90%	17
JIT	5	Total	33	>91%	3
STS	5	Missing	4	Total	33
EDI	2	Total	37	Missing	4
CAD	0			Total	37

Part D: Suppliers' and customers' adaptations in establishing the first supplier-customer relationship

Adaptations	Products		Technological processes		Logistical coordination		Information system		Credit agreement		Administrative routines	
	S.*	C.*	S.	C.	S.	C.	S.	C.	S.	C.	S.	C.
None	13	4	3	4	1	1	1	4	10	3	4	2
Minor	10	1	15	3	11	1	11	1	17	3	17	3
Major	7	1	11	0	18	5	18	2	4	1	11	2
Completely	3	1	3	0	3	0	3	0	2	3	1	0
Valid cases	33	7	32	7	33	7	33	7	33	7	33	7
Missing cases	4	0	5	0	4	0	4	0	4	0	4	0

Part E: Effect of first supplier-customer relationship experience on acquiring new customers

Level of Agreement	The first experience of implementing a supplier relationship is important for	
	Winning customers in the home market (No.)	Winning customers abroad (No.)
Strongly agree	7	11
Agree	24	17
Neither agree nor disagree	2	7
Disagree	2	1
Total	35	36
Missing	2	1
Total	37	37

S.* suppliers C.* customers.

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