

What Drives International Performance? Insights from Computer-Related Service Firms

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Abstract

The aim of this paper is to understand the drivers of international performance for service firms. Qualitative interviews and a literature review are used to build the model which is tested empirically on computer-related (CR) service firms using structural equation modeling (SEM). Results show that standardized services and services requiring limited face-to-face contact positively influence international performance. In addition, joint venture and establishment abroad are the two most effective modes of entry. Finally, firm size and international experience are also significant drivers of international performance. As a practical implication, the research suggests that firms with limited capabilities should prefer to export standardized services requiring limited face-to-face contact.

Keywords: Service firms, service tradability, international performance, internationalization, entry mode, CR services

JEL Classification codes: L25, L86, M00

Services are increasingly seen as the most dynamic and promising area of economic activity throughout the world, which opens opportunities for marketing services internationally (Ekeledo & Sivakumar, 1998; Javalgi, Griffith, & White, 2003). Information and communication technologies are fundamental to changes in service industries and currently represent critical levers of internationalization for service firms (Chesbrough & Spohrer, 2006). They make services globally tradable even in the case of smaller firms without much export capability. The Internet, in particular, has reduced the cost of interaction between firms and customers (Iansiti & MacCormack, 1999; Nevens, 1999), opened new distribution channels, and eliminated the importance of physical distance between firms and customers (Eika & Reistadbakk, 1998). At the same time, it has reduced the barriers to entry (Javalgi, Martin, & Todd, 2004). However, even though firms can now trade services internationally, this does not mean that service firms operating in international markets are profitable. To have a better understanding of this phenomenon, the objective of this research is to identify the major factors driving the international performance of service firms. We will use a three-step process:

1. Identification of service specific and general factors driving international performance through qualitative interviews.
2. Validation of drivers with literature review.
3. Empirical test of hypotheses and performance model validation.

The analysis will focus on CR services, because of their on-line trading maturity and their high degree of digitalization. According to the United Nations Central Product Classification (World Trade Organization, 1998), CR services consist of several subsectors including computer hardware installation, software implementation, data processing, maintenance and repair of computers and peripheral equipment, provision of advice and assistance on matters related to the management of computer resources, online support, database, and website design and management. The major exporters of CR services are mainly located in developed countries, but emerging markets in East Asia are intensifying their international presence (Kozul-Wright & Howells, 2002). The following section contains the conceptual framework justifying the performance model.

Conceptual Framework and Research Model

In order to analyze what drives international performance in service firms, we must first understand the internationalization process and the specificities of services within this process. Internationalization is the process by which a firm moves from operating only in its home market to international markets (Javalgi et al., 2003; O'Farrell, Zheng, & Wood, 1996). Whereas some researchers have claimed that many aspects seen in the manufacturing sector are also applicable to the service sector (Boddewyn, Halbrich, & Perry, 1986), others have argued that the specificities of the internationalization of services make a case for separate consideration (Knight, 1999; Patterson & Cicic, 1995; Vandermerwe & Chadwick, 1989). The major specificities of services include intangibility (Bateson, 1977; Berry, 1980), heterogeneity (Langeard, Bateson, Lovelock, & Eiglier, 1982), perishability (Berry, 1975; Lovelock, 1982), and simultaneity of production and consumption (Grönroos, 1977).

These specificities led us to build a specific model of international performance related to services. The initial research model is presented in Figure 1. The model does not present an exhaustive view of the drivers of international performance. The aim was rather to propose a simple model highlighting the major service characteristics and firm attributes which have the most influence. We could have added internal variables such as international marketing expenditure or managers' experience; however, we preferred to be simple rather than exhaustive. This initial research model draws from the literature (see the following sections) and from a set of 22 phone interviews with senior managers of CR service firms. The aim of these interviews was to explore and validate the most influential drivers of international performance. The initial model consists of three groups of drivers. First, service tradability includes all service-specific variables. Second, firm's profile corresponds to the major attributes of the firm affecting its performance in internationalization. Finally, entry mode includes the various possibilities for a firm to bring its services to the receiving market. The variables and groups of variables are explained in the following subsections, together with the hypotheses.

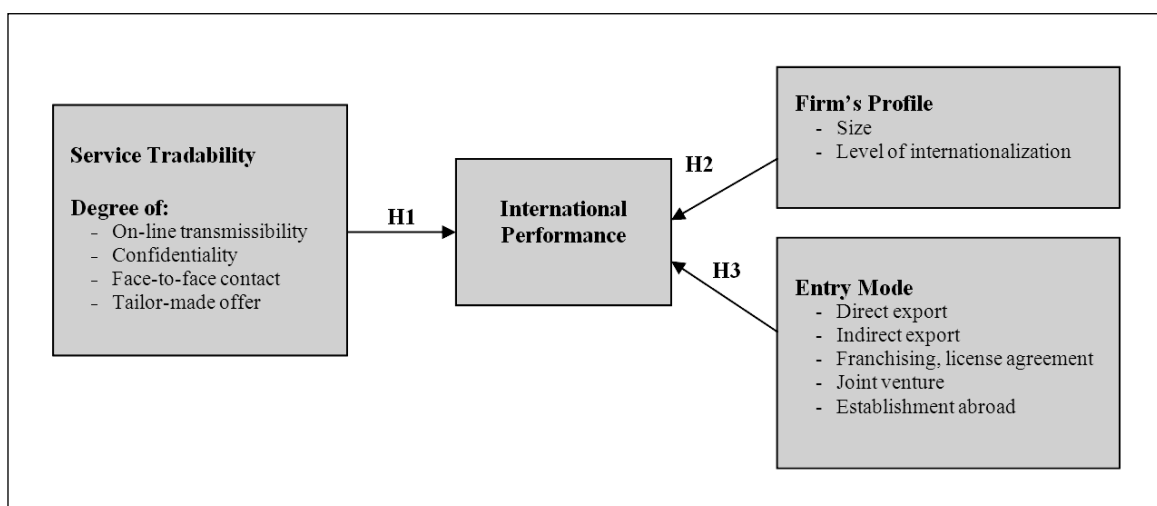


Figure 1. Initial research model.¹

Service Tradability

Service specificities such as intangibility or perishability, which were cited earlier, are not necessarily drivers of performance. Four service characteristics came out of the qualitative interviews as most important drivers of international performance: the degree of (a) on-line transmissibility, (b) confidentiality, (c) face-to-face contact, and finally (d) the degree to which the offer was tailor-made or standardized. Each of these variables explains a part of service tradability. However, they do not necessarily correlate with each other. Thus, service tradability is a group of variables, but not a latent variable.² We define it as the ease with which a service can be traded.

On-line transmissibility:

An easy on-line transmission of digitalized services can positively influence the firm's performance in internationalization, because of cost reduction. With the development of new technologies, services are less dependent on local operations, and geographical distance becomes irrelevant (Kostecki, 1994; Winsted & Patterson, 1998). In addition, the Internet reduces barriers to entry (Javalgi et al., 2004). Direct electronic trade is growing, including online ordering, payment, and supply of services. Some products that traditionally have been delivered as goods can now be sent across borders in digital form (Javalgi et al., 2004). The Internet also reduces the time to market, creates new distribution channels, and eliminates the importance of physical distance between the firm and the client (Eika & Reistadbakk, 1998). Based on these arguments, we hypothesize the following:

H_{1a} : The higher the degree of service on-line transmissibility, the better the firm's international performance.

Confidentiality:

The degree of confidentiality required by a service has an influence on its tradability. The interviews suggested that services requiring a high degree of confidentiality are internationally less tradable. Reasons are that users perceive a psychological risk when markets are geographically distant and it might be more difficult to maintain confidentiality over the distance. This may discourage firms from expanding their activities internationally. Thus, the following hypothesis has been drawn:

H_{1b} : The lower the degree of confidentiality required by the service, the better the firm's international performance.

Face-to-face contact:

The complex technical nature of many professional services involves an important contact with clients. Roberts (2001), commenting on the internationalization of small computer software firms, noted a need to provide extensive client support in terms of consultancy, systems design, installation, training, and after-sales service. She added that this support requires an important face-to-face contact with clients. Client interaction and, in particular, face-to-face contact intuitively require some affinity with the local culture, norms, and values, which make the services less tradable. Thus, distant culture and geography can be barriers to sending employees into the host country and can prevent the firm from providing these services. In addition, providing services with intensive face-to-face contact incurs additional costs to the provider, which could be difficult to overcome (Knight, 1999). This can negatively influence a firm's performance in internationalization. The following hypothesis synthesizes the discussion:

H_{1c} : The lower the degree of face-to-face contact with the client, the better the firm's international performance.

Tailor-made versus standardization:

The interviews suggest that the degree to which offers are tailor-made (vs. standardized) might also be a driver of international performance. It constitutes a characteristic of service tradability as well. Service firms are often confronted with the choice of standardizing or adapting their services. When the client needs are heterogeneous, firms usually opt for an adaptation strategy; when the needs are homogenized, firms would rather opt for a standardization strategy (Roberts, 2001). We argue that providing standardized services might improve the firm's international performance, because, contrary to tailor-made offers, a standardized approach

will save costs (e.g., service development, production, marketing, reduced complexity in technical assistance, etc.) while increasing the potential reach of the service (Ryans, Griffith, & White, 2003; Szymanski, Bharadwaj, & Varadarajan, 1993; Zou & Cavusgil, 2002). Thus, this hypothesis is derived:

H_{1d} : The lower the degree to which an offer is tailor-made, the better the firm's international performance.

Firm's Profile

The two most important drivers of international performance that came out of the interviews and the literature in terms of firm's profile are: (a) the size (turnover, number of employees), and (b) level of internationalization (ratio of foreign assets, ratio of foreigners in top management, ratio of foreign-based employees). The relation of these two latent variables to international performance is justified below.

Size:

Performance in internationalization depends on the firm's profile, such as its size (Cavusgil & Zou, 1994; Lovelock & Yip, 1996). Several studies showed a correlation between the size of a firm and the extent of its international activity (Cavusgil, 1980; Cavusgil & Nevin, 1982; Erramilli & Rao, 1993; Javalgi et al., 2003). Aaby and Slater (1989) said that the larger a firm, the better its ability to manage the risks of internationalization. Indeed, larger firms have a better capacity than smaller ones to expand resources and absorb risks (Erramilli & Rao, 1993). Small firms have more problems with logistics, overseas market contacts, market information access, and legal barriers because their employees lack training in international business (Winsted & Patterson, 1998) and these barriers harm international performance (Patterson & Cicic, 1995). Hence the following hypothesis:

H_{2a} : The larger a firm, the better its international performance.

Level of internationalization:

It could also be supposed that prior foreign experience can play an important role in the firm's international performance. This experience can be a potential source of competitive advantage and is strongly correlated with the level of internationalization. According to Shoham and Albaum (1995), international experience reduces the impact of external barriers and mechanically improves international performance. Thus, we suggest the following hypothesis:

H_{2b} : The higher a firm's level of internationalization, the better its international performance.

Mode of Entry

In their process of internationalization, firms have to decide on the entry modes they will employ. The modes are direct export, indirect export, licensing, franchising, and foreign direct investment (FDI) such as joint venture and owned subsidiary (Whitelock & Jobber, 2004). Each entry mode has specific characteristics regarding: (a) the quantity of resource commitment required, (b) the degree of control, and (c) the degree of technological risk (Maignan & Lukas, 1997; Osland, Taylor, & Zou, 2001; Woodcock, Beamish, & Makino, 1994). Investment capital is a key factor in distinguishing the entry mode between manufacturing firms and service firms (Erramilli & Rao, 1993).

Most service firms use FDI because capital requirements are much lower compared to manufacturing firms (Terpstra & Yu, 1988). However, service firms can also use licensing or franchising to reduce the risks and costs of entering an unknown foreign market. Through franchising, smaller firms with fewer resources can also gain an international presence (Javalgi et al., 2003). An indirect entry (franchising, license agreement, indirect sales by retailer or sales agent, direct export sales) is less risky than the establishment of the firm abroad. On the other hand, a local presence with owned subsidiary offers more control and easier integration than an indirect entry (Erramilli & Rao, 1993; Vandermerwe & Chadwick, 1989).

According to Root (1994), the choice of entry mode has direct consequences on the firm's performance. Gatignon and Anderson (1988) stated that it is a frontier issue that has a major effect on the success of foreign operations. Lu and Beamish (2001) also claimed that there is a strong correlation between the choice of entry mode and performance. For instance, a low level of FDI affects profits negatively (Lu & Beamish, 2001; Nakos & Brouthers, 2002). An entry mode with insufficient control can limit the firm's capacity to coordinate activities, utilize resources, and implement strategies in international markets (Geringer & Hebert, 1991). Pan, Li, and Tse (1999) claimed that the establishment of a firm abroad, for example as a wholly owned subsidiary, results in better performance than an entry mode with less control. Kirca (2005) claimed that a firm with a local presence, such as a wholly owned subsidiary, might provide services with a flexibility that would facilitate its adaptation and its marketing strategy to the changing demands of clients. According to him, this flexibility would positively affect the sales performance of the firm. Thus, the relevant literature suggests the following hypothesis:

H_3 : The entry mode influences the firm's performance in internationalization.

The entry mode is composed of: (a) direct export, (b) indirect export, (c) franchising/license agreement, (d) joint venture, and (e) establishment abroad (wholly owned subsidiary).

Methodology

Measures of the Variables

For the measures related to service tradability, we asked managers of firms to estimate the degree of on-line transmissibility of the services that they provide on a scale of 5 from *very low* to *very high*. We also asked them the degree of confidentiality required to provide their services, the degree of face-to-face contact or interactivity with their customers, and finally, the degree of standardization of their services.

The firm's size is measured by two indicators which are the turnover (in Euros-€) of the company and the number of employees. The firm's level of internationalization is measured by three indicators: the ratio of foreign assets, the ratio of foreigners in top management, and the ratio of foreign-based employees.

In order to measure the entry modes of companies, we asked the managers the dominant entry mode for the various services that they provide. Several answers were possible. The different possibilities were direct export, indirect export, franchising/license agreement, joint venture/partnership, and establishment abroad. If they selected several possibilities, we asked them to rank the entry modes selected by order of importance.

Finally, for the international performance measures, we selected three common indicators. First, we used the ratio of foreign sales which measures the percentage of total sales that come from international activities (Cavusgil, 1984). The second indicator was the number of countries where the services are provided (Samiee & Walters, 1990). This number indicates the organization's success in reaching the international community. According to White, Griffith, and Ryans (1998), it is an indicator of international performance because if a firm is successful in its international expansion, it continues to expand; otherwise, it will often take a defensive position and move back from several markets. The third indicator is the firm perception of its internationalization (Cavusgil & Nevin, 1982). The aim of this indicator is to control the firm's success and the manager's satisfaction about its process of internationalization. Previous successes and satisfaction influence beliefs about the firm's performance in internationalization. The questionnaire items in the appendix present the operationalization of the model variables.

Sampling and Data Collection Procedures

Chambers of commerce, business-to-business (B2B) database on Kompass,³ and industry branch registers were the initial sources to find companies. The selection of firms was based on the following criteria: (a) B2B, (b) geographical area (Western Europe⁴), (c) at least 60% of service (versus product), (d) CR services subsectors, (e) size, and (f) level of internationalization. For the last three factors, a quota system was used. Concerning the level of internationalization, we sent the questionnaire only to firms providing their services in at least one foreign country. Thus, the sampling method was nonprobabilistic.

In terms of procedure, we first contacted the senior managers by e-mail, to inform them about the study, and then by phone, to confirm their participation in the study (senior managers could be Chief Executive Officers—CEOs, vice president, marketing director, chief information officer, or sales manager). To increase the response rate, we also sent follow-up letters by mail. We sent the questionnaire to 541 firms, and 126 firms filled the on-line questionnaires after the follow-up (23% response rate). However, 14 questionnaires were incomplete, and 17 questionnaires were not usable because they did not correspond to our selection criteria mentioned above. Thus, the final sample consisted of 95 firms. In order to reduce the nonresponse bias, we marked the last part of the questionnaire as optional in order not to force the manager to write his name and that of the firm, giving the option to remain anonymous.

Data Analysis Method

We used SEM techniques to estimate our model because these are a priori the best methods to analyze path diagrams when these involve latent variables with multiple indicators (Gefen, Rigdon, & Straub, 2011). Within the SEM techniques available, we chose partial least square (PLS) over covariance-based SEM even though PLS does not allow one to explicitly model the measurement error variance/covariance structure (Gefen et al., 2011) for two major reasons: it has modest distributional and sample size requirements similar to ordinary least squares linear regression (Chin, 1998a; Fornell & Larcker, 1981), and it is well-suited to exploratory research analysis (Chin, 1998a; Fornell & Bookstein, 1982). PLS is a multivariate technique which simultaneously executes both factor analysis and aspects of multiple regressions in order to estimate interrelated dependent relationships (Hair, Anderson, Tatham, & Black, 1998). Chin's PLS-Graph, version 3.0, was used for the analysis. We employed a bootstrapping method (200 subsamples) to test the significant level of regression path coefficients. All constructs are defined in PLS as reflective. This means that each latent variable is indirectly observable by a set of manifest variables, which must be highly correlated.

Results

Descriptive Analysis

Table 1 shows the descriptive statistics with normalized values. It is interesting to notice that more than half of the firms opt for a joint venture. However, most firms use several entry modes in parallel. The number of firms using franchising and/or license agreement was insufficient to explore causal relationships. It led to a high coefficient of variance and thus was excluded from the analysis. As far as the service tradability measures are concerned, the degree of contact and interactivity with the clients has the highest mean (3.58) on a scale from 1 to 5. Looking at the size of companies, one can claim that our sample is mostly composed of companies with an annual turnover around 2-5 million (in €). With a mean of 1.82 on a scale from 1 to 5, we observe that most firms are in the first steps of internationalization.

Table 1
Descriptive Statistics

Variable	Mean	Standard deviation	Coefficient of variation	Min.	Max.
Degree of on-line transmissibility	3.46	1.02	0.29	1.00	5.00
Degree of confidentiality	3.35	1.13	0.33	1.00	5.00
Degree of face-to-face contact and interactivity	3.58	1.06	0.29	1.00	5.00
Degree of tailor-made offer	3.47	1.09	0.31	1.00	5.00
Direct export	0.44	0.49	1.11	0.00	1.00
Indirect export	0.17	0.37	2.17	0.00	1.00
Franchising, license agreement	0.10	0.30	3.00	0.00	1.00
Joint venture	0.65	0.47	0.72	0.00	1.00
Establishment abroad	0.41	0.49	1.19	0.00	1.00
Size	2.57	1.27	0.49	1.00	5.00
Level of internationalization	1.82	0.82	0.45	1.00	5.00
Performance in internationalization	2.34	1.04	0.44	1.00	5.00

Reliability and Validity of Measures

As far as the composite reliability is concerned, Table 2 shows that all latent variables have a rho coefficient higher than 0.8, confirming that the scale reliabilities have adequate and stable measurement properties. Validity is assessed based on three main criteria, namely, unidimensionality, convergent, and discriminant validity. An exploratory factor analysis can verify unidimensionality. For each construct, only the first eigenvalue is over 1, and thus, unidimensionality is confirmed and validated (Dröge, 1996). Convergent and discriminant validity are components of a larger measurement concept known as construct validity (Straub, Boudreau, & Gefen, 2004). Convergent validity is shown when each measurement item is strongly correlated with its construct. As one can observe on Table 2, all loadings are higher than 0.6, indicating that they share sufficient variance with their related construct. Discriminant validity is satisfied when each measurement item is weakly correlated with all other constructs except with the one to which it is theoretically associated (Gefen & Straub, 2005).

Table 2 shows the intercorrelation of the research constructs. The diagonal of this matrix represents the square root of the *average variance extracted*. For adequate discriminant validity, the diagonal elements should be significantly larger than the correlation of the specific construct with any of the other constructs and should be at least 0.5 (Fornell & Larcker, 1981). In our case, discriminant validity is confirmed and sufficient to support the model.

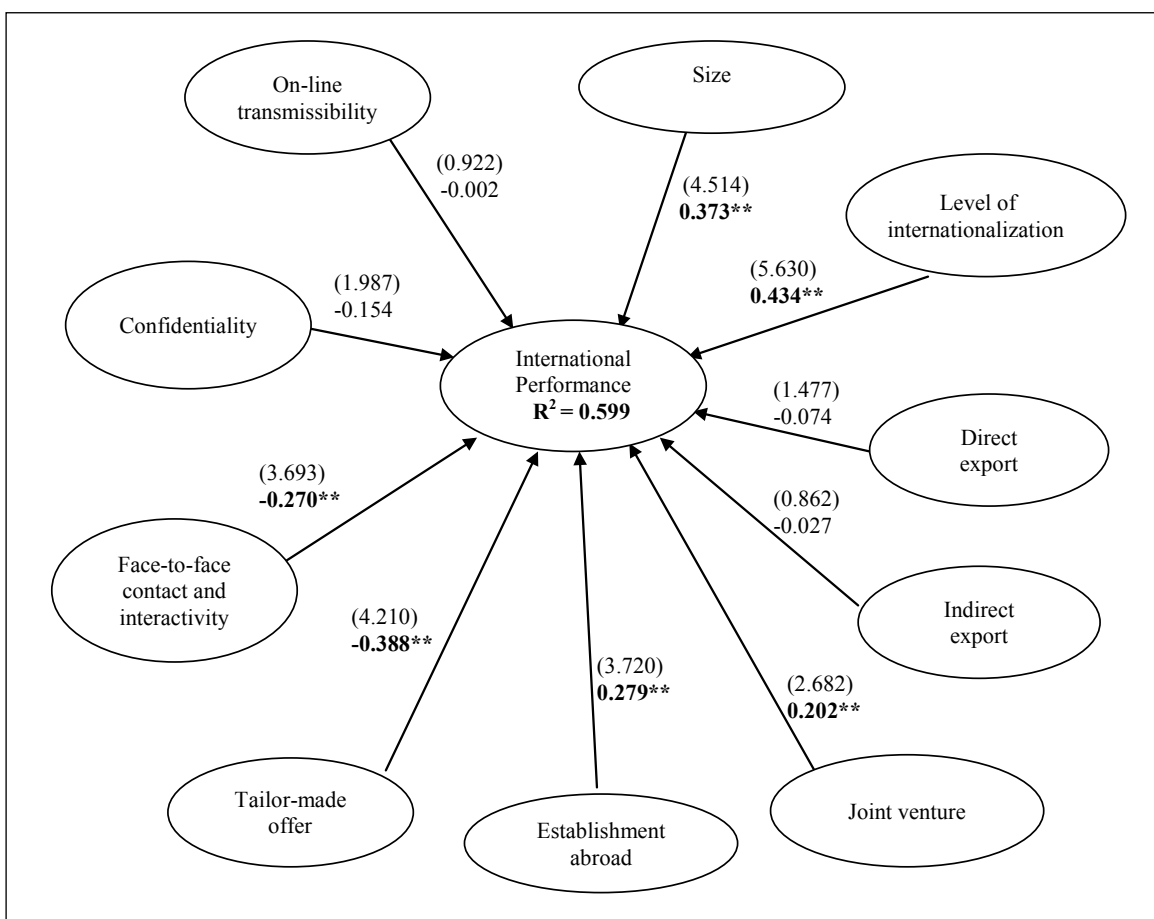
Table 2
Reliability, Convergent Validity, and Discriminant Validity

Constructs	Loadings	ρ^a	1	2	3	4	5	6	7	8	9	10	11
1. Degree of online transmissibility	1.00	1.00	1.00^b										
2. Degree of confidentiality	1.00	1.00	-0.03	1.00									
3. Degree of face-to-face contact	0.92 0.73	0.82	-0.21*	0.14	0.83								
4. Degree to which offer is tailor-made	1.00	1.00	-0.06	-0.06	0.29**	1.00							
5. Direct export	1.00	1.00	0.04	-0.06	-0.19*	-0.22*	1.00						
6. Indirect export	1.00	1.00	-0.21*	0.14	0.03	-0.04	0.02	1.00					
7. Joint venture	1.00	1.00	0.02	0.16	-0.05	-0.03	-0.18*	0.01	1.00				
8. Establishment abroad	1.00	1.00	-0.09	-0.05	0.23*	0.05	-0.46**	-0.07	0.11	1.00			
9. Size	0.95 0.97	0.96	-0.17	0.03	0.18*	-0.15	-0.13	-0.19*	0.04	0.26**	0.96		
10. Level of internationalization	0.68 0.89 0.85	0.85	-0.25**	0.04	0.14	-0.02	-0.16	0.08	0.02	0.25**	0.40**	0.81	
11. Performance in internationalization	0.78 0.74 0.79	0.81	-0.07	-0.13	-0.20*	-0.25**	-0.03	-0.02	0.21*	0.25*	0.52**	0.56**	0.77

Note. (a) * Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level. (b) ^a Rho coefficient = $(\sum \lambda_i)^2 / ((\sum \lambda_i)^2 + \sum (1 - \lambda_i^2))$. ^b Diagonal = (average variance extracted)^{1/2} = $(\sum \lambda_i^2 / n)^{1/2}$.

Results

Figure 2 presents the results of the analysis. Service tradability, the firm’s profile, and the choice of entry modes explain 59.9% of the firm’s international performance. Thus, the selected drivers have a high influence on performance. The Stone-Geisser Q^2 of International Performance is equal to 0.360. Q^2 measures how well observed values are reconstructed by the model and its parameter estimates (Chin, 1998b). The technique represents a synthesis of function fitting and cross validation (Henseler, Ringle, & Sinkovics, 2009). If it is negative, the model has no predictive relevance; values around 0.15 indicate a medium predictive relevance and around 0.35 a large predictive relevance (Henseler et al., 2009). In this model, the independent variables are thus good predictors of the international performance latent variable.



Note. (a) * Significant at 0.05 level. ** Significant at 0.01 level. (b) *t*-values are indicated in the parentheses.

Figure 2. Results of the PLS analysis.

A path coefficient significant at 0.01 level ($\gamma = -0.270$; t -value = 3.693) confirms that a high amount of face-to-face contact with the client negatively influences the firm’s international performance. In the same way, a significant path coefficient ($\gamma = -0.338$; t -value = 4.210) supports that high adaptation needs negatively influence the firm’s performance in internationalization. In other words, the more the service is standardized, the greater the international performance. On the other hand, the two other variables of service tradability (on-line transmissibility and confidentiality) do not influence the international performance.

The firm’s profile has a strong influence on performance. The larger the firm, the better its performance in internationalization ($\gamma = 0.373$; t -value = 4.514). This result confirms multiple studies done previously (e.g., Cavusgil & Zou, 1994; Lovelock & Yip, 1996). According to Aaby and Slater (1989), large firms have a better capacity to manage the risks in their process of internationalization, which improves their performance. The level of internationalization and previous international experience also influences positively the performance in internationalization, as it is significant at 0.01 level ($\gamma = 0.434$; t -value = 5.630).

Firms opting for establishment abroad (wholly owned subsidiary) and/or a joint venture have a better international performance. Their respective path coefficient is significantly positive at 0.01 level (for establishment abroad, $\gamma = 0.279$ and t -value = 3.720; for joint venture, $\gamma = 0.202$ and t -value = 2.682). This result confirms Pan et al.'s (1999) study which also claims that firms with a local presence, such as a wholly owned subsidiary, have a better performance. Neither direct nor indirect export has any influence (positive or negative).

Discussion and Managerial Implications

Not surprisingly, the more experienced in internationalization and the larger the firm, the better the international performance. Larger and experienced firms are probably better equipped in terms of resources and competencies to analyze, learn, and invest in foreign markets. The findings showing that fewer face-to-face contacts and standardized services affect international performance positively are especially important for smaller firms. We can hypothesize that tailor-made services and important interactivity require more capabilities and have more uncertainty in international markets, hence an increased failure rate. Based on this assumption, small and inexperienced firms should start exporting services which can be standardized and which require limited face-to-face contacts. Those two service characteristics also allow for a greater reach of customers with limited investment. In addition, with globalization, customer needs might tend to be more homogenized, which could increase the success of standardization. For tailor-made and interactivity-intensive services, firms should have sufficient experience and knowledge of the receiving country to be able to address the specific customer needs and reduce the risk of investing in a new geographic area.

The fact that confidentiality does not affect international performance is a sign that information and communication technologies are perceived as secure enough to allow trade with remote markets. Although CR services are probably more digitalized than other services, this is not an advantage in terms of international performance. Findings show that firms should not start exporting because their service is easily transmissible. In the same way, firms should not see services that cannot be traded on-line as a barrier to international performance.

Joint venture and establishment abroad both positively affect international performance. An explanation might be that these two modes of entry require a real involvement from the exporting firm in the internationalization process. A higher involvement means that the firm allocates its resources and competences to the process, which pays off. It is indeed easy to use direct or indirect export entry modes just to try exporting and see if it works, without involving the firm's capabilities. Larger firms are probably more prone to establish abroad (hence a correlation between the size and the mode of entry; refer to Table 2). However, joint venture is not correlated with size and is an efficient mode of entry that smaller firms could use.

Conclusion

The aim of the research was to understand the drivers of international performance for service firms. Tested on the sector of CR services, the model shows that firms providing services with limited face-to-face contact with clients have a better performance in internationalization. Similarly, firms providing standardized services increase their international performance. The assumption is that tailor-made and face-to-face contact intensive services require more knowledge, expertise, and investment, which decreases the certainty of the return on investment. Confidentiality and on-line transmissibility of the service do not affect international performance. In terms of entry modes, joint venture and establishment abroad are the most efficient. These two entry modes require a high involvement from the exporting firm, which might explain its performance. Finally, the study confirms that usual performance drivers such as size and international experience affect international performance significantly.

Further research could supplement the findings and increase their robustness. First, our sample is nonprobabilistic due to the lack of an appropriate database including our selection criteria. This means that all the target population could not be included in this sample. Second, the model could be tested on firms providing other types of services to increase the generalization potential of the research. Finally, we wanted to have a first simple initial model highlighting the most important drivers and service specificities contributing to international performance. Although the explained variance is high, the model could be further refined including new groups of variables such as export market characteristics (e.g., regulation or geographical distance) or rationale for internationalization.

Endnotes

- 1 In mathematical terms, the equation of the model is the following: $International\ Performance = \sum_{i=1}^{11} \gamma_i \xi_i + \zeta_{IntPerf}$, where ξ_i are the 11 independent variables of the model (on-line transmissibility, size, etc.), γ_i are the loadings between those independent variables and *International Performance*, and $\zeta_{IntPerf}$ is the random disturbance term. *International Performance* is the mean of the following indicators: ratio of foreign sales, number of countries where the services are provided, and manager's perception of firm's internationalization (see appendix).
- 2 We could have chosen to model service tradability as a latent variable with formative indicators. However, this type of variable requires an exhaustive list of indicators, whereas we selected the most influential in the interviews.
- 3 Database found on <http://www.kompass.com>
- 4 The questionnaire was sent to firms based in Finland, France, Germany, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

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Appendix

Questionnaire Items

These questionnaire items measured the model variables. They comprise only part of the on-line questionnaire that was sent to our population. The original questionnaire has a different structure and look.

Service Tradability Measures

Firms answered the questions for each category of CR services that they are providing.

On-line transmissibility

What is the degree of on-line transmissibility of the various services considered? (5-point scale from *very low* to *very high*)

Confidentiality

What degree of confidentiality is required by the various services considered? (5-point scale from *very low* to *very high*)

Degree of face-to-face contact and interactivity

What degree of face-to-face contact with your customers is required to market your various services? (5-point scale from *very low* to *very high*)

What degree of interactivity with your customers is required to market your various services? (5-point scale from *very low* to *very high*)

Tailor-made vs. standardized

To what degree is the approach in marketing the various services considered a custom-made (versus standardized) approach? (5-point scale from *standardized* to *custom-made*)

Firm's Profile Measures

Size

What is your company's turnover (in €)? (5-point scale)

How many employees does your firm have? (5-point scale)

Level of internationalization

What is the ratio of foreign assets in your company's total assets? (5-point scale: *less than 20%*, *21-40%*, *41-60%*, *61-80%*, *more than 80%*)

What is the ratio of foreigners in top management in your company? (5-point scale: *less than 20%*, *21-40%*, *41-60%*, *61-80%*, *more than 80%*)

What is the ratio of foreign-based employees to your total workforce? (5-point scale: *less than 20%*, *21-40%*, *41-60%*, *61-80%*, *more than 80%*)

Entry Mode Measures

What is your dominant entry mode for the various services (several answers possible)? A. Direct export, B. Indirect export, C. Franchising or license agreement, D. Joint venture or partnership, E. Establishment abroad, F. Other.

If you have selected several fields above, please rank them in order of importance.

International Performance Measures

What percentage of your turnover is earned outside of the country in which your headquarter(s) is (are) based? (5-point scale: *less than 20%*, *21-40%*, *41-60%*, *61-80%*, *more than 80%*)

In how many countries are your services provided? (Open question transformed to 5-point scale)

Internationalization is a priority task for your company. (5-point scale: From *do not agree at all* to *completely agree*)