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The role of information technology in corporate strategy of small and medium enterprises

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Abstract The crisis of the new economy might have cast doubt on the usefulness of the Internet for business activities. However, it is unquestionable that the possibilities offered by Internet-based technologies in terms of information processing, transfer and collection enable the firm to improve market knowledge and the relationship with clients and suppliers.

This work explores, theoretically and empirically, the possibilities offered by the Internet to facilitate the internationalization process of Small and Medium Enterprises (SMEs) as well as to improve the relationship with other firms within the same value chain. Using a wide representative sample of Spanish SMEs, the empirical analysis confirms the benefits of the Internet in both cases.

Keywords Internet technology · Internationalization · Outsourcing · SMEs

Introduction

In the last few years, the benefits of the Internet for business activities have been put to question as a result of the crisis of the new economy. However, Internet-based technologies are known to offer promising opportunities for both virtual as well as brick and mortar firms. Particularly, the Internet could be a useful tool for SMEs, characterized by their limited access to certain resources and markets. This work explores the possibilities offered by the Internet to facilitate the internationalization process of SMEs as well as to improve the relationship between these and other firms within the same value chain.

SMEs play a very important role in the economy as job creators. They also make significant contributions to technological progress and increased competitiveness (Dutta and Evrard, 1999). These firms have traditionally suffered from a lack of competitiveness, particularly at

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international level. However, in the last few years there has been a growing number of SMEs that are born global or become international only a few years after being set up (Oviatt and McDougall, 1994; Zahra et al., 2000; Autio et al., 2000).

International entrepreneurship studies (Oviatt and McDougall, 1994, 2005) have analysed these phenomena. In the early 1990s it concentrated on the internationalization of new ventures and then moved on to research international activities in all firms regardless of age, size or industrial sector (Zahra and George, 2003; McDougall and Oviatt, 2000). This approach adds new elements to the analysis, such as the importance of concrete resources (Knight and Cavusgil, 2004; Madsen and Servais, 1997) and the usefulness of networks (Johanson and Vahlne, 2003).

Likewise, a combination of external factors has greatly improved internationalization opportunities for SMEs (Acs and Preston, 1997; Lu and Beamish, 2001). Among these factors, we should mention transportation, growing market liberalization and the use of efficient communication technology. The appearance of certain tools such as the Internet has led to a revolution in a large number of industries and opened up new opportunities for firms. Along these lines, Amit and Zott (2001) identify up to four different ways of creating value in e-commerce projects: higher effectiveness, exploitation of new business opportunities and consolidation of competitive positions, growth in client fidelity or restriction of competitors' possibilities.

The Internet enables firms to obtain abundant and valuable information about markets (Evans and Wurster, 1999). Consequently, the firm finds itself in a better position to meet the segment needs of specific clients and to tailor its products and services to conform those needs. Similarly, the Internet reduces the entry barriers to international markets, which in turn encourages the firm's international expansion and minimizes the importance of the local market.

Furthermore, the way of competing has changed in the last few years. In the past, firms used to have non-cooperative relationships not only with competitors but also with suppliers and even clients (Porter, 1980), whereas nowadays firms belong to networks where they can specialize in a certain activity so as to maximize efficiency and increase their innovation capacity. The new ways of competing question national borders since the aim is to find the most suitable partner regardless of his physical location. The Internet could play a crucial role in this process to ensure network coordination and transparency.

We can conclude that the Internet improves information processing, communication and collaboration patterns. These characteristics could improve SMEs' competitiveness in international markets as well as facilitate the relationships with other firms within the same value chain, something we shall deal with in the next sections.

This work is organized as follows. Firstly, we set out the arguments using different theoretical approaches. Secondly, we describe the data sample and the methodology used to carry out the empirical work, followed by the development of our empirical models. Finally, the conclusion summarizes the results, implications, limitations and directions for future research.

Theoretical basis

There are two particularly relevant theoretical approaches to analyse the role of the Internet in firms' behaviour and strategy: the resource-based view and the transaction costs theory.

The resource-based approach emphasizes the role of the firm's endowment of resources in the establishment of competitive advantages (Barney, 1991; Amit and Schomaker, 1993).

Table 1 Percentage of firms using Internet-based technologies (only firms with Internet Domain Name)

	Firm size (number of employees)	
	200 and under	over 200
Website pages in company's own server	32.1	50.3
Purchase of goods or services via Internet	14.8	23.3
e-commerce sales to final consumers	5.1	6.4
e-commerce sales to other business	6.8	10.3

Created by the authors using data from SBS 2001–2002.

The profitability potential of any firm lies on its ability to exploit its sources of competitive advantage successfully and to develop an appropriate resource base. Several works establish the required characteristics for a given resource to be considered strategic and become a source of sustainable competitive advantage (Barney, 1991; Grant, 1991; Peteraf, 1993). Internet-based technologies, just like other Information and Communication Technologies (ICT), do not meet the necessary requirements to constitute a strategic resource since they are widely used and accessible to all firms. Therefore, the Internet does not represent a competitive advantage in itself unless it complements other strategic resources (Mata et al., 1995; Porter, 2001). Consequently, it is essential for the firm to develop capabilities in order to reap the benefits resulting from the use of Internet-based technologies.

Traditionally, it has been argued that, as opposed to the bigger companies, SMEs have to face certain disadvantages in terms of resource availability (DuBois, 1993) as well as limited negotiation power with clients and suppliers. By contrast, flexibility is probably the most distinct advantage of SMEs, allowing them to adjust themselves quickly in response to market demands and to build significant innovation capability.

Even in the case of Internet-based technologies, which are widely accessible to all firms, SMEs seem to be more poorly equipped than the bigger firms, as shown in Table 1, where we can see the use of Internet-based technologies for a wide sample of Spanish firms.[1] Thus, for example, only one out of three SMEs in the sample has their web page hosted in its own server while half of the big firms use their own server for this purpose. Likewise, the number of firms using the Internet to purchase goods and services is larger among the big firms than the SMEs.

Transaction costs economics (Williamson, 1975, 1985) provides a complementary theoretical approach to analyse the role of Internet-based technologies in firms' behaviour and competitiveness. Information asymmetries and the assumption of opportunistic behaviours are some of the main causes of transaction costs, leading to the existence of big, vertically integrated companies.

Internet enables all contracting parties to exchange information. In fact, this is one of the most valuable functions ascribed to the Internet by Spanish firms, as shown in Table 2. Along these lines, 85% of the surveyed firms consider the Internet an important, or very important, information tool; almost 90% of them consider it important to reinforce corporate image, and over 50% of them regard it as a means of assistance to consumers and users. Therefore, the Internet facilitates information transfer, which is a way of reducing asymmetry problems

[1] See the Database section in the Empirical Analysis for detailed information on the characteristics of the sample used (SBS).

Table 2 Consequences for having a presence in Internet (SME) (only firms having their own Internet Domain)

	(1)	(2)	(3)	(4)
Reinforce corporate image	32.2	55.0	9.1	3.6
Offer information	44.5	40.4	10.3	4.8
Assist consumers and users	12.9	40.8	32.41	13.8
e-commerce	8.7	25.0	38.5	27.6
Reduce supply costs	3.7	17.3	39.7	39.1

(1) Very important (2) Important (3) Not very important (4) Not important at all.
Created by the authors using data from SBS 2001–2002.

(Clemons and Row, 1992) and improving the relationship with clients and suppliers (Thatcher and Oliver, 2001).

International expansion

Knowledge and information are highly valuable resources when firms come to capturing new markets and expanding internationally (Johanson and Vahlne, 1977), whether the expansion takes place gradually or in a non-incremental way (Autio et al., 2000). The Internet enables firms to identify new market opportunities leading to business expansion (Davis and Harveston, 2000). Specifically, it allows SMEs to gain deeper knowledge of target markets. Thus, the Internet also provides opportunities for firms to gather data on international markets (Evans and Wurster, 1999), select suppliers and establish direct contact with clients using a low cost communication technology. On the other hand, the potential client will also benefit from a more detailed knowledge of the firm, whose corporate image and reputation in the international markets is enhanced. Consequently, it is to be expected that SMEs, usually subject to a more restricted resource portfolio, will find it easier to expand internationally with the use of Internet.

In addition, the Internet can be used to enhance information flow and collection, as well as coordination among firms, which may lead to the establishment of agreements, a necessary tool for international expansion (Venkatraman, 1994; Dewett and Jones, 2001). Cooperation with other firms provides useful information about business opportunities, foreign market characteristics, and problems involved in the process, etc; consequently, the perceived risk of internationalization is significantly reduced (Bonaccorsi, 1992).

Summing up, Internet-based technologies facilitate the process of information gathering and knowledge acquisition, either directly or through third-party agreements, they also enable firms to approach target markets. For all these reasons, a positive relationship between the use of the Internet and international expansion is expected.

The internet and the value chain

According to the resource-based view of the firm, each company can specialize in what it is good at and capture the rest of the markets. These market transactions can be carried out either through specific exchanges or through collaboration agreements, since inter-firm relationships are simplified and enhanced.

Alliances are a valuable, non-substitutable and inimitable resource (Gulati et al., 2000) for any company, but perhaps even more so for SMEs because they can gain access to and

share each other's resources (Gulati, 1998). Inter-firm agreements make it easier to exploit economies of scale and economies of scope and are also an appropriate mechanism both to share and create knowledge (Dyer and Singh, 1998; Dyer and Nobeoka, 2000). Consequently, agreements multiply competitive options for SMEs' needs, putting them in a better position to compete with the bigger companies (Fernández and Nieto, 2005).

As stated before, the Internet simplifies the relationship with clients, suppliers and competitors and allows knowledge sharing within a partnership (Venkatraman, 1994; Dewett and Jones, 2001). As a result, transaction costs can be significantly reduced (Dewan et al., 1998), encouraging firms to establish agreements with other companies. Along these lines, Hitt (1999) and Brynjolfsson et al. (1994) found a positive relationship between ICT investment and a lesser degree of vertical integration. This suggests that the smaller, disintegrated firms can survive successfully in the markets.

Following the foregoing arguments, it is to be expected that the use of Internet-based technologies will enable firms to improve their relationship with suppliers, obtaining the necessary inputs for the production of goods and provision of services. In this way, we expect to find a positive relationship between the use of the Internet in SMEs and the outsourcing of activities.

Empirical analysis

Database

The source of the empirical work is the Survey of Business Strategies (SBS). It is a firm-level panel of data compiled by the Spanish Ministry of Science and Technology. The SBS covers a wide sample of Spanish manufacturing firms operating in all industry sectors. The sample is representative of the population of Spanish manufacturing firms with 10 to 200 employees. In this range, the sample is random and stratified according to firm size (in terms of number of employees) and industry.

In this study, the figure of 200 employees is taken as the upper limit for the definition of SME. We use the SBS for the years 2000 and 2001. Information is available for approximately 1800 annual observations. According to our classification, nearly 65% of these observations pertain to SMEs.

The empirical contrast was carried out with adequate statistical and econometric techniques. Specifically, we have used OLS estimates and tobit models (model with censored dependent variables). The statistical program used in this study is STATA. In any case, the potential methodological difficulties require a rigorous and careful treatment of certain problems, such as endogeneity of regressors.

Analysis variables

Dependent variables

Internationalization. To approximate the company's activity in international markets, we have used "export intensity," which accounts for the ratio of international sales to total sales (INTEN). Despite the three main internationalization strategies i.e. exporting, licensing and direct foreign investment, we decided to focus on the exporting activity since this is the most common strategy adopted by SMEs to internationalize (Wolff and Pett, 2000), also confirmed for the Spanish case (Molero et al., 1998; Pla-Barber, 2001).

Outsourcing. To approximate these decisions we use information regarding contracts with third parties in the production of finished goods and firm-specific components. The variable included in the analysis is the ratio of the value of total outsourcing production to total sales (OUTS).

Independent and control variables

Implementation of Internet-based technologies. Among the benefits of the Internet, we should highlight the following: information transfer and collection as well as support for buying and selling exchanges. To measure them the SBS provides valuable information about: (a) website pages hosted in the company's own server (WEB), (b) e-commerce sales to final consumers (E-COMM), (c) purchase of goods or services via the Internet (E-PURCH) and, (d) e-commerce sales to other businesses (E-COB).

Family business. We include a dummy variable to capture some entrepreneurial characteristics such as the family character of the business. This variable takes value one if the SME belongs to a family with one or more members in managerial positions, and zero in the other cases (FAM).

Standard. We differentiate whether or not the firm's products are standardized. A dummy variable is used in models (STAND).

Innovation. Empirical work generally agrees that innovation is an important factor to explain export performance (Ito and Pucik, 1993; Wakelin, 1998). We use R&D expenditure per employee to control for the potential impact of innovation efforts on exporting behaviour (R&D).

Process innovation. A dummy variable is included to inform about process innovations, such as new organizational production techniques or new machinery introduced by the firm (PROIN).

Sector. To control for the industry effect, sectoral variables have been introduced. Dummy variables are included to indicate whether the sector where the SME operates is high-tech (HTS), mid-tech (MTS) or low-tech (LTS) using the OECD classification.

Size. The number of employees is included in the models to control for the effects of firm size (SIZE).

Table 3 illustrates the descriptive statistics and the correlations between variables.

Methodology and results

We estimate two basic empirical models that analyse the theoretically postulated relationships shown in Table 4.

In the first one (Model 1), we estimate a Tobit model to explain the export intensity. Tobit models refer to regression models in which the range of the dependent variable is constrained in some way; they are also called models of limited dependent variables. An important characteristic of the data is that the dependent variable takes value zero for several

Table 3 Descriptive statistics and correlation matrix of independent variables

	Mean	St. Dev	1	2	3	4	5	6	7	8	9	10	11	12	13
1. E-PURCH	0.08	0.26	1												
2. E-COB	0.03	0.15	0.21	1											
3. E-COMM	0.02	0.15	0.13	0.45	1										
4. WEB	0.13	0.34	0.14	0.17	0.19	1									
5. FAM	0.44	0.49	0.02	0.03	0.03	−0.02	1								
6. STAND	0.03	0.17	−0.02	0.02	0.02	0.00	−0.03	1							
7. R&D	173.5	3344	0.01	0.00	0.00	0.00	0.02	−0.00	1						
8. PROIN	0.10	10.29	0.01	−0.01	0.01	0.07	0.00	0.07	0.01	1					
9. MTS	0.49	0.50	0.04	0.01	0.02	0.04	−0.06	−0.02	−0.02	0.03	1				
10 LTS	0.40	0.49	−0.05	−0.01	−0.01	−0.06	0.14	0.01	−0.03	−0.08	−0.82	1			
11. SIZE	47.6	0.87	0.12	0.06	0.08	0.18	0.22	−0.01	−0.01	0.12	0.05	−0.15	1		
12. OUTS	0.05	0.10	0.07	0.06	0.04	0.10	0.04	−0.02	0.01	0.04	0.06	−0.04	0.04	1	
13. INTEN	0.13	0.22	0.18	0.05	0.05	0.07	−0.13	−0.01	0.03	0.08	−0.03	−0.06	0.33	0.09	1

Table 4 Theoretical relationships postulated

E-COB	SME has a selling system to other business	INTERNATIONALIZATION
E-COMM	SME has a selling system to final consumers	
WEB	Website pages hosted in company´s own server	
E-PURCH	SME purchase goods or services via the Internet	OUTSOURCING

Table 5 Empirical models

	INTEN (1)	OUTS (2)
E-PURCH	–	0.017**
		(2.19)
E-COB	0.095*	–
	(1.87)	
E-COMM	0.041	–
	(0.75)	
WEB	0.025	0.025***
	(1.13)	(3.94)
FAM	−0.039**	0. 010**
	(−2.35)	(2.10)
STAND	−0.087*	−0.014
	(−1.79)	(−1.12)
R&D	0.003*	–
	(1.85)	
PROIN	0.069***	0.009
	(2.70)	(1.20)
MTS	−0.105***	0.014**
	(−3.96)	(1.97)
LTS	−0.078***	0.005
	(−2.82)	(0.63)
SIZE	0.157***	0.003
	(16.19)	(1.28)
CONST.	−0.476***	0.015
	(−10.25)	(1.24)
Model test	396.96***	5.54***
	(0.000)	(0.000)
R^2		19.7
		(Adj. 16.1)
P-seudo R^2	16.36	−2955.75

Total observations: 2248.
$^{***}p < 0.01$, $^{**}p < 0.05$, $p^* < 0.10$, t-statistics in brackets.

observations. This feature destroys the linearity assumption, so the less square methods are clearly inappropriate. This is the case of our variable "export intensity" (INTEN). In the second one (Model 2), we estimate an OLS regression model to analyse the determinants of the decision to outsource production activities. Table 5 shows details of the models.

Model 1 is statistically significant below the one-percent level. Three dimensions of Internet implementation are included: E-COB, E-COMM and WEB (the SME operates a selling system to other business, a selling system to final consumers and a web site, respectively). In this decision, the three coefficients show a positive relationship between the independent and dependent variables, but only the coefficient of the E-COB variable is statistically significant. Therefore, we could state that there is a positive effect of e-commerce to other business on the internationalization of SMEs.

The innovative character of SMEs is positively associated with the export activity. Both coefficients concerning innovation, PROIN and R&D, are positive and significant. Family ownership and standardization of firm's products seem to negatively affect the decision. Finally, the coefficients that indicate whether the SME belongs to low and medium-tech intensity sectors are negative and significant.

Model 2 is estimated to clarify the potential impact of the variables on the decision to outsource. This model is statistically significant below the one-percent level. The estimation reveals that the implementation of Internet significantly affects the decision to outsource. The use of the Internet in this model is represented by E-PURCH and WEB (the SME operates a buying system through the Internet and has a web site, respectively). The two variables are positive and significantly associated with the dependent one. Therefore, we observe that the Internet encourages the outsourcing of SME's activities. The FAM variable, which is significantly associated, provides significant information regarding ownership and control characteristics.

According to the results above, the consequences of having a presence in the Internet seem to be positive. Furthermore, we could state that SMEs benefit from the use of Internet-based technologies in terms of international expansion and improvement of the relationship with suppliers.

Discussion and conclusions

Traditionally, SMEs have been recognized as important players in national economies, creating jobs and making significant contributions to economic and technological progress. Understanding how the Internet affects SMEs' strategies is essential considering the high percentage of SMEs in most economies, the importance of the new economy and the emergence of e-business as well as market internationalization.

Any additional insights into the impact of Internet usage on efficiency, competitiveness and performance becomes critical to understand strategic issues in a global knowledge economy as well as to detect trends and, in many cases, challenges for the survival and adaptation of SMEs. Hence, this research focuses on the relationship between Internet implementation and different issues of strategic behaviour such as internationalization and outsourcing of activities.

Our starting premises are that the use of Internet-based technologies facilitates the international expansion of SMEs and improves the relationships with other firms through the outsourcing of activities. We observe that our findings—based on a representative sample of Spanish SMEs—confirm these premises.

Specifically, despite the fact that we have not found a significant relationship between e-commerce sales to final consumers and international expansion, firms conducting e-commerce with other businesses have proven to favour internationalization. It is easier for the firm to sell to other firms via the Internet than to reach final clients. In the first case, that is, selling to other firms, the number of transactions may be lower but the turnover is higher, unlike transactions with final clients. In addition, firms enhance their reputation and brand image more easily through inter-firm sales than through final clients. Furthermore, order management systems and general logistics are also made simpler.

Curiously enough, owning web-site pages does not seem to significantly affect the export intensity of the firm. However, it does show a positive and significant relationship with the outsourcing of activities, just like the purchase of goods and services through the Internet. In other words, SMEs making full use of the Internet tend to outsource activities to a larger extent than SMEs which do not rely on it. The possibilities of exchanging information opened up by the Internet help consolidate outsourcing relationships.

Therefore, identifying possible relationships between the adoption of the Internet and the establishment of international agreements will be our next subject of research. The current study has shown that certain ownership types, such as family owners, may affect the strategic behaviour of SMEs. We believe it would be interesting to study them thoroughly.

There are limitations in our findings, partly attributable to the lack of information available. Particularly, the measure of the use of the Internet is probably less meaningful than expected. There is also room for improvement in the amount and quality of the information available. Additional, specific surveys on the use of the Internet and its effects on strategy and firm performance could be incorporated for this purpose. It would certainly be interesting to be provided with a longitudinal series as well as to explore the capabilities emerging from the interaction between the Internet and other firm resources.

Despite its limitations, the research presented here contributes to filling the existing gap and constitutes a first step in the direction of more comprehensive future research. In any case, the results obtained are promising and should encourage SMEs' managers to implement Internet-based tools to improve competitiveness. The Internet's potential as an effective and efficient source of information is enormous and that the business opportunities it provides have not been fully exploited yet.

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References

Acs Z, Preston L (1997) Small and medium-sized enterprises, technology; and globalization: Introduction to a special issue on small and medium-sized enterprises in the global economy. Small Business Econ 9:1–16

Amit R, Schoemaker PJH (1993) Strategic assets and organizational rent. Strat Manage J 14:33–46

Amit R, Zott C (2001) Value creation in e-business. Strat Manage J 22:493–520

Autio E, Sapienza H, Almeida J (2000) Effects of age at entry, knowledge intensity and imitability on international growth. Acad Manage J 43(5):909–1014

Barney J (1991) Firm resources and sustained competitive advantage. J Manage 17(1):99–120

Bonaccorsi A (1992) On the relationship between firm size and export intensity. J Intern Business Stud 23 (4):605–635

Brenahan TF, Greenstein S (1997) Technical progress and co-invention in computing and in the uses of computers. BPEA, Microeconomics, 1–77

Brynjolfsson E, Malone TW, Gurbaxani V, Ajit K (1994) Does information technology lead to smaller firms? Manage Sci 40(2):1628–1644
Clemons EK, Row MC (1992) Information technology and industrial cooperation: The changing economics of coordination and ownership. J Manage Info Sys 9(2):9–28
Davis PS, Harverston PD (2000) Internationalization and organizational growth: The impact of internet usage and technology involvement among entrepreneurship-led family business. Family Business Rev 13(2):107–121
Dewan S, Michael SC, Min C (1998) Firm characteristics and investments in information technology: Scale and scope effects. Info Syst Res 9(3):219–230
Dewett T, Jones GR (2001) The role of information technology in the organization: A review, model and assessment. J Manage 27:313–346
Dubois D (1993) Competency-ased performance improvement: A strategy for organizational change. HRD Press, Inc, Amherst, MA
Dutta S, Evrard P (1999) Information technology and organisation within European small enterprises. European Manage J 17(3):239–251
Dyer JH, Singh H (1998) The relational view: Cooperative strategy and sources of interorganizational competitive advantage. Acad Manage Rev 23(4):660–679
Dyer JH, Nobeoka K (2000) Creating and managing a high-performance knowledge-sharing network: The Toyota case. Strat Manage J 21:345–367
Evans P, Wurster T (1999) Getting real about virtual commerce. Harvard Business Rev 77(6):85–94
Fernández Z, Nieto MJ (2005) Internationalization strategy of small and medium-size family business: Some influential factors. Family Business Rev 18(1):77–89
Grant RM (1991) The resource-based theory of competitive advantage: Implications for strategy formulation. California Manage Rev 33:114–135
Gulati R, Nohria N, Zaheer A (2000) Strat networks. Strat Manage J 21(3):203–215
Gulati R (1998) Alliances and networks. Strat Manage J 19:293–317
Knight GA, Cavusgil ST (2004) Innovation, organizational capabilities, and the born-global firm. J Internal Business Stud 35:124–141
Hagedoorn J (1993) Understanding the rationale of strategic technology partnering: Interorganizational modes of cooperation and sectoral differences. Strat Manage J 14:371–385
Hitt LM (1999) Information technology and firm boundaries: Evidence from panel data. Info Sys Res 10(2):134–149
Ito K, Pucik V (1993) R&D spending, domestic competition, and export performance of Japanese manufacturing firms. Strat Manage J 14(1):61–75
Johanson J, Vahlne JE (1977) The internationalization process of the firm—A model of knowledge development and increasing foreign market commitments. J intern Business Stud 8(1):23–32
Johanson J, Vahlne JE (2003) Business relationship learning and commitment in the internationalization process. J Intern Entrepr 1:83–101
Lu JW, Beamish PW (2001) The internationalization and performance of SMEs. Strat Manage J 22:565–586
McDougall PP, Oviatt BM (2000) International entrepreneurship: The intersection of two research paths. Acad Manage J 43(5):902–906
Madsen TK, Servais P (1997) The internationalization of born globals: An evolutionary process? Intern Business Rev 6(6):561–583
Mata FJ, Fuerst WL, Barney JB (1995) Information technology and sustained competitive advantage: A resource-based analysis. MIS Quarterly December: 487–505
Molero J, Buesa M, Fronfría A (1998) The internationalization of SMEs innovatory firms in Southern European economies. TSER Project. Conference on European Union integration in the context of globalization, London.
Oviatt BM, McDougall PP (1994) Toward a theory of international new ventures. J Intern Business Stud 25(1):45–64
Oviatt BM, McDougall PP (2005) The internationalization of entrepreneurship. J Intern Business Stud 36:2–8
Peteraf M (1993) The cornerstones of competitive advantage: a resource-based view. Strat Manage J 14:179–191
Pla-Barber J (2001) The internalisation of foreign distribution and production activities. New empirical evidence from spain. Intern Business Rev 10:455–474
Porter ME (1980) Competitive strategy: Techniques for analysing industries and competitors, Free Press, New York
Porter ME (2001) Strategy and the internet. Harvard Business Rev March: 63–78
Thatcher ME, Oliver JO (2001) The impact of technology investments on a firḿs production efficiency, product quality and productivity. J Manage Info Sys 18(2):17–45

Venkatraman N (1994) It-enabled business transformation: From automation to business scope redefinition. Sloan Manage Rev 35:73–87
Wakelin K (1998) Innovation and export behaviour at the firm level. Res Policy 26(7/8):829–841
Williamson OE (1975) Markets and hierarchies. Free Press, N.Y.
Williamsom OE (1985) The economic institutions of capitalism. Free Press, N.Y.
Wolff AJ, Pett TL (2000) Internationalization of small firms: An examination of export competitive patterns, firm size, and export performance. J Small Business Manage 38(2):34–47
Zahra SA, Ireland RD, Hitt MA (2000) International expansion by new venture firms: International diversity, mode of market entry, technological learning and performance. Acad Manage J 43(5):925–950
Zahra SA, George G (2003) International entrepreneurship: the current status of the field and future research agenda. In: Hitt MA, Ireland RD, Camp SM, Sexton DL (eds) Strat entrepreneurship: Creating a new mindset, Blackwell Business, Oxford