

# Internet Use for Exporting Purposes: The Challenges for Greek SMEs

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## Abstract

*In the past 15 years a lot of academic inquiry has been made on the role of the Internet in international marketing and business activities, as evidenced by the growing volume of information on the subject. On the other hand, little space has been devoted to the potential use of Internet in exporting. This paper reports the results of a survey of the sporadic empirical investigations that have been conducted throughout the world both in developed and developing countries in order to identify the best practices on the subject of Internet use for exporting purposes by SMEs. The literature survey leads to the identification of the advantages of Internet use as an international marketing tool, the exporting problems that can be resolved by the use of Internet, and the perceived barriers to exporting by firms that possess their own Web site. Finally, based on the international experience, we present the potential challenges and opportunities for Greek SMEs regarding Internet use in exporting.*

**Key words:** *Exports, Internet, SMEs, E-Commerce*

## 1. Introduction

In due course, the fact that domestic markets are becoming more and more saturated, combined with the intensified local and international competition, has created several problems concerning the survival and growth of SMEs. The latter is crucial to every country and to every government because of: a) the important role they play for the economic development of the country, and b) the fact that they represent a very big percentage of the business sector. For example, in Greece only small firms (<10 persons) represent 95-97% of the total number of enterprises and they employ 30% of the country's labor force (Press Release – Ministry of Economics, 2004; [www.e-activistes.gr](http://www.e-activistes.gr); [www.ebusinessforum.gr](http://www.ebusinessforum.gr)). In order to overcome the problem of small and saturated domestic markets, a large number of SMEs decided to engage in exporting, as one of the biggest advantages of exporting is accessing new markets and approaching new foreign customers. Competing in the international business environment initially requires harder, more sustained work and effort than managers would normally experience in the domestic market (Seringhaus, 1989).

Exporting is vital to a country's economic survival (Kedia and Chokar, 1986), contributing to the future wealth, increase in domestic production and employment. Analyzing and understanding the process, which SMEs use in reaching a decision to implement an export strategy, can identify those factors which encourage or hinder the export activity. Such analysis and understanding will enable more SMEs to think about exporting as an alternative of their strategy to survive, grow and flourish in today's highly competitive business environment (Tajzadeh-Namin et al., 1996). For example, Du Pont, a U.S. chemical firm that was established as a medium sized enterprise, has been able to remain a competitor in the tough chemical market because it began to pay serious attention to exports back in 1978, when the dollar's value fell sharply. In 1997, Du Pont's exports from the U.S. amounted to \$4 billion, 9% of the company's total revenues. For the year 2003, Du Pont was the 67<sup>th</sup> largest U.S. industrial/service corporation according to Fortune 500 listing and the company's

revenues were up to \$27 billion (www.dupont.com; Ball and McCulloch, 1999, p. 483). Another example is Bicknell Manufacturing Co., who expects its exports to amount to \$1 million, 20% of the firm's total sales. Although the company, a manufacturer of industrial drill bits for construction equipment, has been in business for 100 years, it had never exported until the last decade (Ball and McCulloch, 1999, p. 483).

Initially, exporting appears to be highly complex for a variety of reasons like fluctuation of costs along with the demand of goods and services, differences between national orientations and international business practices, cultural diversities and lack of exporting experience. For these reasons a constant feedback and reviewing of export strategy is mandatory, given the volatility of foreign exchange and markets (Sercu and Vanhulle, 1992). Only those firms with long term managerial commitment, competence and alertness to environmental changes will succeed (Tajzadeh-Namin et al., 1996). In addition, SMEs have to carefully decide which markets to enter, whether to export or to produce in the overseas market and how to reconstruct the firm from a domestic to an international business (Holzmuller and Kaspar, 1991). During the effort to succeed internationally as exporters, SMEs have to surmount multiple barriers.

In this paper, first we are going to present a list of the most significant exporting barriers that we developed after a detailed literature review on the subject. Next, we are going to present the results of a survey of the sporadic empirical investigations that have been conducted throughout the world both in developed and developing countries in order to define: 1) the advantages of Internet use as an international marketing tool, 2) if and how the use of Internet can help exporters, and especially exporting SMEs, to overcome or minimize some of the barriers to exporting, and 3) the perceived barriers to exporting by firms that possess their own Web site. In the last section of this paper, we are going to present the potential challenges and opportunities for Greek SMEs regarding Internet use in exporting.

## **2. Barriers to Exporting**

Exporting barriers are often the cause of many SMEs failures in international business operations, bringing financial losses along with negative attitudes toward exporting among regular, sporadic and would-be exporters. Therefore, removal or minimization of these obstacles would contribute toward a better export performance (Bilkey, 1978). Private and public sector decision makers have recognized that there is a variety of barriers which can inhibit exports and thus they need to be understood (Ramaseshan and Soutar, 1996). In view of this, barriers to exporting can be classified in many ways. In the international literature, the most commonly used classifications are: a) internal and external barriers, b) domestic and foreign barriers, and c) tariff and non-tariff barriers.

Internal barriers are intrinsic to the firm and are usually associated with available organizational resources or the approach to export marketing (Leonidou, 1995a). Ramaswami and Yang (1990) refer to internal barriers as 'internal resource constraints', describing the firm's need to possess a series of resources in order to be able to initiate exporting (Ramaswami and Yang, 1990; Suarez-Ortega, 2003). There is general agreement that internal characteristics act as greater constraints in shaping the export strategies of small firms than of larger businesses (Campbell, 1996). External barriers stem from the environment within which the firm operates (Leonidou, 1995a). External or exogenous barriers have their origins in the uncertainty of international markets, largely due to activities of other players in the market – such as competitors, foreign governments, supply and demand – meaning that this type of variables transcend the control of the exporting company (Suarez-Ortega, 2003).

Export barriers can also be classified according to a domestic/foreign typology, where domestic barriers are those found within the country-base of the manufacturing firm (e.g., lack of government assistance) and foreign barriers are relating to problems in the foreign markets where the firm operates or intends to operate (e.g., keen competition in foreign markets) (Leonidou, 1995a). A more comprehensive way of classifying exporting obstacles is to combine the above two typologies – internal/external and domestic/foreign (Leonidou, 1995b). This classification scheme provides four categories of export barriers: i) internal-domestic, i.e. barriers arising from within the firm and relating to the home country, ii) external-domestic, i.e. obstacles associated with the domestic environment, but lying beyond the control of the firm, iii) internal-foreign, i.e. barriers relating mainly to the firm's marketing strategy in foreign markets, and iv) external-foreign, i.e. uncontrollable problems found in foreign markets (Leonidou, 1995a).

Another common classification of barriers to exporting is tariff and non-tariff barriers. A tariff is a tax duty levied on imports as products cross a national boundary (Soontiens, 2002). The use of tariffs translates in a difference in price paid for an imported product by a domestic consumer and the amount received by the foreign exporter. Tariffs are the oldest and simplest instruments of trade policy while the nature of non-tariff barriers seems to change as the trade environment changes (Soontiens, 2002). Non-tariff barriers, or 'invisible barriers' (Baldwin, 1970, p. 5), are any public or private measures other than conventional tariffs that restrict imports or artificially stimulate exports (Cao, 1980).

During the last four decades an extensive amount of research has been conducted worldwide with the object of tracing barriers to exporting. The results of these research studies led us to the conclusion that while there is no unanimity about either the number of underlying factors or the exact content of each of these, it is possible to identify a limited number of impediments capable of summarizing the complete set of export barriers. Regardless of which category of classification they belong, the most significant barriers to exporting, according to numerous research studies, are presented in Table 1.

### **3. Investigation Approach**

During the past 10-15 years, a lot of academic inquiry has been made to define Internet's role in international marketing and business activities, seeking new paradigms that appropriately incorporate this new tool in marketing theory, while on the other hand, little space has been devoted to the potential role of the Internet in exporting (Samiee, 1998). It is very important to highlight the fact that the number of research studies on the subject of Internet use in exporting is extremely limited because of the short history of the Internet and especially of the World Wide Web. After all, WWW was conceived in 1989 by Tim Berners-Lee at the European Centre for Nuclear Research. On this basis, we reviewed, assessed and synthesized six existing empirical studies in order to enlighten the specific subject.

Our investigation covered the empirical research on the subject of Internet's role in the elimination or minimization of the exporting barriers and in marketing activities. The study covers both SMEs and larger firms from developed and developing countries. This enables us to define similarities or differences on a larger scale providing results for further research. 96.3% of the researched firms were exporters, while 61.2% were using the Internet. Some of the firms had their own web site and some of them were using the Internet without having a personal web page.

**Table 1:** Presentation of the most significant export barriers

<b>Export Barrier</b>	<b>Research Study</b>
1. Limited information to locate/analyze foreign markets	Alexandriedes (1971), Pavord & Bogart (1975), Bilkey & Tesar (1977), Bilkey (1978), Tesar & Tarleton (1982), Kaynak & Kothari (1983), Yaprak (1985), Kedia & Chokar (1986), Kaynak et al. (1987), Cheong & Chong (1988), Keng & Jiuán (1989), Dichtl et al. (1990), Tseng & Yu (1991), Leonidou (1995a), Leonidou (1995b), Sorensen & Buatsi (2002)
2. Keen competition in foreign markets	Groke & Kreidle (1967), Alexandriedes (1971), Kaynak & Kothari (1983), Bauerschmidt et al. (1985), Karafakioglu (1986), Kedia & Chokar (1986), Sharkey et al. (1989), Dichtl et al. (1990), Tseng & Yu (1991), Leonidou (1995b), Ramaseshan & Soutar (1996), Bennett (1997), Sorensen & Buatsi (2002)
3. Psychic distance	Bilkey & Tesar (1977), Rabino (1980), Tesar & Tarleton (1982), Yaprak (1985), Kedia & Chokar (1986), Cheong & Chong (1988), Keng & Jiuán (1989), Dichtl et al. (1990), Bennett (1997)
4. Lack of knowledge about exporting procedures and documents	Alexandriedes (1971), Johanson & Vahlne (1977), Rabino (1980), Tesar & Tarleton (1982), Kaynak & Kothari (1983), Yaprak (1985), Kedia & Chokar (1986), Cheong & Chong (1988), Keng & Jiuán (1989), Bennett (1997)
5. Inadequate foreign representation and selection of secure distributors	Bilkey (1978), Rabino (1980), Tesar & Tarleton (1982), Kaynak & Kothari (1983), Yaprak (1985), Kedia & Chokar (1986), Cheong & Chong (1988), Keng & Jiuán (1989), Dichtl et al. (1990), Tseng & Yu (1991), Bennett (1997)
6. Expectations of high risk/costs involved in selling abroad	Tesar & Tarleton (1982), Kaynak & Kothari (1983), Keng & Jiuán (1989), Dichtl et al. (1990), Tseng & Yu (1991), Bennett (1997)
7. Adaptation and servicing of products to be exported	Tookey (1964), Rabino (1980), Tesar & Tarleton (1982), Yaprak (1985), Kedia & Chokar (1986), Cheong & Chong (1988), Keng & Jiuán (1989), Tseng & Yu (1991)
8. Lack of skilled/trained personnel	Alexandriedes (1971), Rabino (1980), Kaynak & Kothari (1983), Yaprak (1985), Cheong & Chong (1988), Keng & Jiuán (1989), Dichtl et al. (1990), Tseng & Yu (1991), Bennett (1997)
9. Shortage of working capital to finance exporting activities	Bilkey (1978), Tesar & Tarleton (1982), Kaynak & Kothari (1983), Bauerschmidt et al. (1985), Yaprak (1985), Kedia & Chokar (1986), Cheong & Chong (1988), Keng & Jiuán (1989), Dichtl et al. (1990), Tseng & Yu (1991), Ramaseshan & Soutar (1996), Sorensen & Buatsi (2002)
10. Restrictions imposed by foreign rules/regulations	Alexandriedes (1971), Bilkey (1978), Kaynak & Kothari (1983), Bauerschmidt et al. (1985), Yaprak (1985), Kedia & Chokar (1986), Keng & Jiuán (1989), Dichtl et al. (1990), Tseng & Yu (1991), Bennett (1997)
11. Insufficient production capacity	Alexandriedes (1971), Kaynak & Kothari (1983), Bauerschmidt et al. (1985), Yaprak (1985), Keng & Jiuán (1989), Kaynak (1992), Sorensen & Buatsi (2002)
12. High shipping/transport costs	Alexandriedes (1971), Pinney (1971), Kedia & Chokar (1986), Cheong & Chong (1988), Barker & Kaynak (1992), Ramaseshan & Soutar (1996), Bennett (1997), Sorensen & Buatsi (2002)
13. Variation in exchange rates	Tesar & Tarleton (1982), Bauerschmidt et al. (1985), Yaprak (1985), Karafakioglu (1986), Kedia & Chokar (1986), Keng & Jiuán (1989), Bennett (1997)

**Table 1:** Presentation of the most significant export barriers (continued)

<b>Export Barrier</b>	<b>Research Study</b>
14. Inability to offer competitive prices abroad	Kedia & Chokar (1986), Keng & Juan (1989), Dichtl et al. (1990), Tseng & Yu (1991), Leonidou (1995b)
15. Difficult/slow collection of payment abroad	Alexandriedes (1971), Tesar & Tarleton (1982), Kaynak & Kothari (1983), Kedia & Chokar (1986), Bennett (1997)
16. Foreign market access and export promotion	Rabino (1980), Czinkota & Johnston (1983), Samiee & Walters (1991)
17. Lack of managerial/personnel time	Rabino (1980), Kaynak & Kothari (1983), Yaprak (1985), Bennett (1997)
18. Lack of governmental assistance/incentives	Cheong & Chong (1988), Sharkey et al. (1989)
19. Existence of attitudinal barriers in the minds of management personnel	Tesar (1975), Korth (1991)
20. Environmental standards	Chambers & Kohn (2001), Kohn (2003)
21. Political instability in foreign markets	Kaynak et al. (1987)

The principal sources for the investigation were articles published in journals. A total of six empirical research studies, contained in five articles (Bennett, 1997; Poon and Swatman, 1997; Bennett, 1998; Moodley, 2002; Sorensen and Buatsi, 2002), were identified as appropriate for the purposes of this investigation. Only studies for which research was based on the collection, analysis and presentation of primary data were selected for inclusion in the review process. In that way, we were able to reassure the collection of adequate information on research methodologies and empirical findings. Theoretical studies (e.g. Samiee, 1998) were omitted from our investigation due to the comparative nature of the analysis pursued.

#### **4. Methodological Aspects**

In reviewing the research methodologies of the empirical studies conducted on the subject of Internet use in exporting, a number of aspects were examined. Half of the researched studies focused on issues encountered by developing countries (Sorensen and Buatsi, 2002; Moodley, 2002) while the other half by developed ones (Bennett, 1997; Poon and Swatman, 1997; Bennett 1998). The developed countries researched are United Kingdom, Germany and Australia while the developing countries belong to Africa. An important issue that emerges from reviewing these articles is the different perception of exporting barriers between the developing countries and the industrialized world, combined with the different technological level and infrastructure.

The sample sizes ranged from 19 to 210 enterprises, with two studies questioning more than 100 firms. Personal contact methods were used for smaller samples, with mail questionnaires used in large-scale studies. Overall, 1,517 firms were contacted, while 621 were researched by the studies examined, of which approximately 241 were not using Internet. The majority of the studies gave indication of the response rate. They were ranging from as low as 27% to as high as 94.6%, with an average response rate of 46.2 %.

Five studies chose the mail survey as their basic method of data collection, mainly for reasons associated with convenience, economy and time. Personal interviews were employed in half of the studies and were used more extensively for small sample sizes. Only Poon and Swatman (1997) used telephone interviews, replacing personal interviews and site visits when they were not feasible, owing to distance or time factors.

Compared to typical research in international marketing, the statistical analysis carried out on the subject of Internet use for exporting purposes was relatively simple, leading to limited exploitation of useful information. Percentage and, in some cases, absolute frequencies were the predominant analytical techniques employed by all the studies. Less extensively, mean scores were also used for analysis, particularly in relation to ordinal data. For scaling purposes, the studies used ordinal scales (usually Likert-type scales ranging from three to five points). More advanced statistical techniques, such as factor analysis, principal components analysis and varimax factor rotation, were employed only by Bennett (1997; 1998).

## **5. Empirical Findings**

The investigation of the empirical studies covered in the present paper, yielded the following categories of important findings that play a crucial role regarding Internet use in exporting: a) the advantages of using Internet as an international marketing tool, b) the list of eliminated or minimized barriers to exporting by using Internet, and c) the perceived barriers to exporting by firms that possess a Web site.

### **5.1 Advantages of Internet Use as an International Marketing Tool**

As an international marketing weapon, Internet has a great number of advantages. All studies had special references on this subject. A full report, containing elements from all of the research studies, on the advantages is presented in Table 2.

Some of these advantages are valid under specific preconditions. For example, the fact that Internet is accessible from all corners of the world is valid only under the condition that the user has the necessary equipment for accessing the Internet. Another example is the fact that the Internet allows direct and immediate foreign market entry to the smallest of businesses only under the presupposition that small businesses have the necessary financial background to acquire the required technological infrastructure and the appropriate know-how to apply it.

Another important issue is that a small part of the advantages are closely related to the size of the firm, meaning that larger firms are more likely to exploit the full advantages that derive from Internet use due to their enhanced financial and organizational power than smaller or medium-sized enterprises. For example, low cost of initiation and maintenance of a Web site, the fact that access to the World Wide Web is available to all enterprises on an equal basis and regardless of company size, as well as the fact that small businesses can express World Wide Web 'voices' as salient and professional as those of the largest firms, doesn't mean that the Internet can fully wipe out the existing advantages of the larger and better established exporters. These firms tend to have more recognizable (brand) names, a better image, and relationships that have been developed over many decades. In addition, they continue to support their non-Internet marketing activities at full force. Even their Internet-based activities are more elaborate and extensive than these of smaller firms (e.g. larger firms maintain dozen of sophisticated Web sites in several languages) (Samiee, 1998).

### **5.2 List of Eliminated or Minimized Barriers to Exporting by the Use of Internet**

During the last decade, the question of which exporting barriers Internet use reduces or eliminates and, if so, to what extent, occupied several research studies. A common finding among the reviewed studies in our investigation is the fact that the Internet has the potential of resolving some serious long-standing problems associated with exporting. Furthermore, it was really interesting to discover that in all the studies the list of eliminated or minimized barriers to exporting by the use of Internet was almost identical. The major impediments that

**Table 2: Advantages of Internet use**

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1. Accessible from all corners of the world
  2. Global nature
  3. Easy access to a vast amount of information of any kind
  4. Low cost of acquiring information
  5. Promotes direct sales via interactive dialogue with new customers
  6. Helps the spread of existing knowledge
  7. Created a whole new industry
  8. Continuous and low cost advertisement and promotion of the products
  9. Increases revenues
  10. Access to new unexploited markets
  11. Low cost of initiation and maintenance
  12. Higher efficiency of business transactions
  13. High speed and low cost of communications
  14. Web sites are cheap and easy to set up
  15. Suppliers may incorporate into their Web sites as much information about themselves as they wish
  16. Origination costs are lower than for hard copy catalogues
  17. Print expenses are non-existent
  18. Access to the World Wide Web is available to all enterprises on an equal basis, regardless of company size
  19. Small businesses can express World Wide Web 'voices' as salient and professional as those of the largest firms
  20. The information can penetrate the narrowest of niche markets among information seekers
  21. Removes all geographical constraints
  22. Permits the instant establishment of virtual branches throughout the world
  23. Allows direct and immediate foreign market entry to the smallest of businesses
  24. Offers online customer support
  25. Creation of Cybermalls (a variety of web pages in a single site) has the potential of capturing a variety of customers types
  26. Improves communication between suppliers, distributors and foreign customers
  27. Psychic distance might not be as relevant for an Internet user as for others, because an exporting firm communicates with all the world's markets simultaneously and regardless of economic, cultural and commercial differences
  28. In contrast to the requirements for Electronic Data Interchange (EDI) across a value-added network, a company can use the Internet even before it has identified its ultimate trading partners
  29. Provides both synchronous and asynchronous communications overcoming time problems
  30. Provides multimedia transmission and the transmission of electronic documents
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constitute that list are: information acquisition (about suppliers, competitors, foreign market characteristics and foreign customers and their buying behavior), access to foreign markets, export promotion, communication with foreign suppliers or customers, the costs associated

with the above activities, inadequate foreign representation and psychic distance (barriers number 1, 16, 6, 5, and 3, in Table 1).

If we take, in relation with these barriers, a closer look at Table 2 where we presented the results concerning the advantages of Internet use, we can see that Internet provides (among other things): easy access to a vast information of any kind, low cost of acquiring information, access to new unexploited markets, continuous and low cost advertisement and promotion of the products, high speed and low cost of communications, low cost of initiation and maintenance procedures, instant establishment of virtual branches throughout the world, and a way of reducing psychic distance because an exporting firm communicates with all the world's markets simultaneously and regardless of economic, cultural and commercial differences (advantages number 3, 4, 8, 10, 11, 13, 22 and 27). On these bases, we are able to compare the advantages of Internet use with the barriers that constitute the list and to conclude that the employment of a Web site, and of Internet in general, for exporting activities does in fact remove, or at least substantially diminish, the above-mentioned obstacles. Note, that information acquisition was stated by the majority of the researched firms, as one of the most important obstacles to exporting. This fact reveals the importance of Internet use on the subject of exporting barriers elimination.

### **5.3 Perceived Barriers to Exporting by Firms that Possess a Web Site**

Beside the list of eliminated or reduced impediments, the results of the investigation showed us that Internet has also a significant impact on the perception of barriers to exporting by companies that possess a Web site. Seven basic export barriers were identified to represent significant problems for firms with a Web site. These barriers are: getting paid, exchange rates, documentation problems, transportation of products, import restrictions, intense competition in foreign markets and the risks attached to exporting (barriers number 15, 13, 4, 12, 10, 2 and 6, in Table 1). In the above list of perceived obstacles we can find only one of the barriers that the use of Internet eliminates or diminishes (barrier number 6: high risk/costs). This situation derives from the fact that the firms who took part in the reviewed studies were in the possession of Web sites and thus under Internet's influence.

## **6. Opportunities and Challenges for Greek SMEs**

The empirical findings that we presented contain a lot of useful information for exporting and non-exporting SMEs both in developed and developing countries. We identified several advantages connected to Internet use for exporting activities. We also discovered which barriers are eliminated or diminished by the use of Internet. Now, the question arises as to whether these findings are applicable for SMEs all over the world. In this last section of our investigation, we are going to try to answer this question for Greek SMEs by presenting the current situation as well as new opportunities and challenges.

In Greece, according to data from the National Statistics Department of Greece (NSDG) in 1995 there were 509,837 SMEs. For the year 2003, SMEs represented 81% of the total number of firms (E-business Forum, 2003, p. 8). There are three important characteristics regarding Greek SMEs (E-business Forum, 2003, p. 9):

1. The absolute domination of very small firms (1-10 employees), which represented 97.8% of the 509,837 SMEs. Firms that employed 1 to 5 employees constituted 98% of this 97.8%!
2. The high sectoral gathering around wholesale and retail trade, which occupied 44% of the SMEs.

3. The high regional gathering of SMEs, since 59% of the total number of Greek SMEs were operating in Athens (42%) and in Thessaloniki (17 %).

These characteristics, and especially the size of SMEs in Greece, must always be considered for the understanding and interpretation of all research findings because they basically reflect the situation in very small companies (1-5 employees). In order to answer if the findings are applicable for Greek SMEs, we must first describe the current situation of SMEs in Greece regarding Internet use, in order to reveal their special characteristics and overall position.

The numbers and statistical indexes that we are going to use in the description of the current situation of Greek SMEs regarding Internet use, come from a very recent research study entitled 'Market research for E-business' (2004). It is a quantitative research study conducted by the E-Business Forum in Greece, which used both face-to-face interviews and questionnaires over a sample of 2,012 Greek SMEs from all the 52 prefectures of the country. Collection of data took place from October 13, 2003 to January 8, 2004.

As we mentioned earlier, according to data from the National Statistics Department of Greece (NSDG) in 1995 there were 509,837 SMEs in Greece. Among these SMEs (for the year 2003), 183,541 (36%) used one or more computers for their business activities, while another 48% (244,722) declared that they had the intension to buy one. Another 9% stated that they were using a kind of network (LAN, WAN, Intranet, Extranet) in their companies, while 18.36% were using their computers for accounting applications and 10.44% for production applications.

For the same period of time, 19.8% of the total number of Greek SMEs were connected to the Internet, while the percentages for years 2002 and 2001 were 19.8% and 16.2% respectively. These figures reveal that during the last two years there were not any new connections to the Internet or the new connections were numerically the same with the number of companies disconnected from the Net. The main reasons for not having a connection to the Internet were (in a descending order): it was not required by the nature of the work, lack of training and information, absence of customized applications, lack of technological infrastructure, expensive cost of connection, lack of demand by customers and suppliers, complex use, and absence of interest. Another 6.6% expressed the intension to establish a connection in the future. The main uses of Internet from Greek SMEs for the year 2003 were (in a descending order): e-mail (70%), information acquisition (67%), transactions with the public sector – payment of taxes (33%), research (33%), entertainment (32%), transactions with the public sector – insurance payments (26%), communication (22%), information about competitors (18%), online banking transactions (13%), creation of web site for promotional reasons (11%), and e-commerce (4%). Notice that the percentages were referring to SMEs connected to Internet and not to the total number of Greek SMEs. This means that the real number of SMEs that used, for example, e-mail was 335 or 16.6% of the total number.

It is of high interest to preview some statistical figures about Web sites. From the total number of Greek SMEs, only 3.1% possessed their own Web site, while its main use was the promotion of the products and the provision of information. Another 3.6% stated that they had the intention to create their own Web site in the future, while only 1.77% were applying any kind of security policy on their Web site. Last, only 0.52% of Greek SMEs were making online sales, while another 6% were participating in training seminars.

If we want to interpret all those statistical figures and describe the position and challenges of Greek exporting firms and especially of SMEs, first we have to note that Internet is not a substitute for an export strategy. It is true, though, that under the right circumstances Internet

can play a crucial role in promoting exports. Second, according to data from Eurostat, Greek exports as a percentage of GDP are the lowest among the member states of the Euro-zone and one of the lowest among the developed countries of the world. This fact leaves space and opportunities for new or already established companies. Old and new SMEs should engage in exporting in order to fill that space and gain revenues and international experience. Third, the findings of the E-businessForum research study are revealing that the largest part of Greek SMEs (80.2%) were not even connected to the Internet while only 16.6% were using Internet for e-mail purposes. If we compare these numbers to the 3.1% of Greek SMEs that had their own Web site, and to the 0.52% that made online sales we can easily understand that the competition in the field of e-business and e-commerce in Greece is more or less non-existent, leaving an open market for newcomers. Fourth, the main impediments to a more intensive use of the Internet by Greek SMEs constitute one more clear proof that SMEs in Greece are in the early stages of Internet use at company level, while at the same time the main uses of Internet prove the attempt to exploit the basic Net advantages as they were presented in Table 2.

## **7. Conclusions**

The purpose of this paper was to review, assess, and synthesize the conceptual, methodological and empirical aspects of available research studies on the subject of Internet use in exporting. The empirical findings of this investigation focused mainly on SMEs due to the fact that this is the most common business form of enterprises throughout the world. The field of e-business and e-commerce has attracted, especially during the last decade, a great deal of attention from researchers, because of the crucial role that technological applications can play in international business activities.

On the conceptual side, the present research started with a detailed literature review on the subject of barriers to exporting that yielded a list of 21 basic exporting impediments. Exporting barriers are often the cause of many SMEs failures in international business operations, bringing financial losses along with negative attitudes toward exporting activities among regular, sporadic and would-be exporters. Thus, by highlighting the importance of barriers to international trade and exporting activities and by presenting a list of these barriers we established the basis for an in depth exploration of Internet use for exporting purposes.

As far as the adopted research methodologies are concerned, a number of aspects, like industrial coverage, firm size, technological infrastructure, and the focus country, were examined. In accordance with the different perception of exporting barriers between the developing countries and the industrialized world combined with the different technological level and infrastructure, the majority of the studies seem to ignore industry-specific factors such as production capacity and cost structures. The reviewed studies focused on SMEs because they have to deal with much more difficulties in exploiting overseas opportunities due to a number of limiting factors. The statistical analysis carried out on the subject of Internet use for exporting purposes was relatively simple, leading to limited exploitation of useful information. The investigation has revealed that if the dynamic character of Internet is to be understood, more longitudinal studies are required. Future research should have a more cross-cultural orientation in order to conduct solid and more objective comparisons. Greater attention should also be given to adequate sample sizes and sufficient testing of non-response behavior. Finally, the use of more sophisticated statistical tools will lead to better and more secure conclusions.

The analysis of the empirical studies yielded a list of important findings that play a crucial role regarding Internet use in exporting. This list is constituted by the following elements: a) advantages of Internet use as an international marketing tool, b) eliminated or minimized

barriers to exporting by the use of Internet, and c) perceived barriers to exporting by firms that possess a Web site.

All reviewed studies had special references concerning the advantages of Internet use. The careful processing of these references helped us to develop a list of the 30 most important advantages of Internet use as a marketing tool and revealed that some of them are valid under specific preconditions. Another important detection had to do with the fact that a small part of the advantages are closely related to the size of the firm, meaning that larger firms are more likely to exploit the full advantages that derive from Internet use due to their enhanced financial and organizational power than smaller or medium-sized enterprises are.

A common finding among the reviewed studies in our investigation is the fact that Internet has the potential of resolving some serious long-standing problems associated with exporting, while at the same time the list of eliminated or minimized barriers to exporting by the use of Internet, which we presented earlier, was almost identical among these studies. The major impediments that constitute that list are: information acquisition (about suppliers, competitors, foreign market characteristics and foreign customers and their buying behavior), access to foreign markets, export promotion, communication with foreign suppliers or customers, the costs associated with the above activities, inadequate foreign representation and psychic distance. After the comparison of the advantages of Internet use to the barriers that constitute the list, we can deduce that the employment of a Web site, and of Internet in general, in exporting does in fact remove, or at least substantially diminish, the list of revealed obstacles.

The results of the investigation showed that Internet has also a significant impact on the perception of barriers to exporting by companies that possess a Web site. These barriers are: getting paid, exchange rates, documentation problems, transportation of products, import restrictions, intense competition in foreign markets and the risks attached to exporting. It is of great importance to underline that only one of the barriers that the use of Internet eliminates or diminishes is part of the above list of perceived obstacles because of the fact that the firms who took part in the reviewed studies were under Internet's influence.

In the last section of this paper we thoroughly described the current situation of Internet use by Greek SMEs in order to present new opportunities and challenges for Small and Medium-sized enterprises that operate in Greece. The basic results that derive from the description of current situation are:

1. Internet is not a substitute for an export strategy. It is true, though, that under the right circumstances Internet can play a crucial role in promoting Greek exports.
2. Despite the fact that Greece is considered a developed country, research studies are revealing that the vast majority of Greek SMEs are not using the Internet, or they use it only to send or receive e-mails. This means, that the competition in the field of e-business and e-commerce in Greece is more or less non-existent, leaving an open market for newcomers.
3. The main impediments to a more intensive use of the Internet by Greek SMEs constitute another clear proof that SMEs in Greece are in the early stages of Internet use at company level, while at the same time the main uses of Internet prove the attempt to exploit the basic Net advantages.

E-commerce and Internet are relatively new fields in the international literature. This means that further research is needed in order to reach a point where we are going to be able to build on solid and justified theoretical and practical knowledge. The challenges and opportunities for Greek SMEs on the subject of Internet use for exporting purposes are big and still at an early stage. There is still plenty of room for newcomers in order to gain experience, profits and the competitive advantages that the possession of these elements

offers. Use of some elements developed in this study, such as the compiled lists of barriers to exporting, advantages of Internet use, and eliminated or diminished export barriers by the use of Internet, will help future research to study the subject in a more uniform and organized manner.

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