Journal of Business Research 68 (2015) 1506–1511

Contents lists available at ScienceDirect

Journal of Business Research

Efficiency and exports: Evidence from Southern European companies ☆

Encarnación Moral-Pajares [a,*], Adoración Mozas-Moral [b,1], Enrique Bernal-Jurado [c,2], Miguel Jesús Medina-Viruel [d,3]

[a] Department of Economics, Campus Lagunillas, building D-3, office 277, University of Jaén, Spain
[b] Department of Business Organization, Marketing, and Sociology, Campus Lagunillas, building D-3, office 137, University of Jaén, Spain
[c] Department of Economics, Campus Lagunillas, building D-3, office 266, University of Jaén, Spain
[d] University of Jaén, Spain

ARTICLE INFO

Article history:
Received February 2014
Received in revised form December 2014
Accepted January 2015
Available online 11 February 2015

Keywords:
Efficiency
Exports
DEA
Internet
Agricultural sector
Olive oil sector

ABSTRACT

This paper analyzes the relationship between efficiency and exports in Southern European olive oil sector companies with websites in 2012 and investigates the effects of companies' age, export attitude, the output percentage to sell abroad, its website quality, and use of online commercial transactions on company's efficiency. Data Envelopment Analysis (DEA) method assesses export and non-export companies' efficiency, and logistic regression identifies variables affecting the efficiency of the firms in this study. Results confirm that export companies are more efficient than non-export, especially if they adopt an active attitude towards export and conclude online commercial transactions. Although following a cross-sectional study of a specific sector has certain limitations, the conclusions are valid and applicable for those working in this sector, particularly executives, and for those with political responsibilities.

1. Introduction

The capabilities of a sector's business system affect international sales opportunities. According to Maertens, Minten, and Swinnen, (2012), the business system communicates region's generic advantages as competitive advantages abroad. Export requires companies to operate in less familiar and more uncertain surroundings than a home market. Information on consumption patterns, distribution systems, regulatory framework, logistics, among others, is more difficult to acquire and less reliable, making international business more difficult and uncertain (Leonidou, 2004).

The Internet provides companies with much valuable information on potential foreign customers (Evans & Wurster, 1999) and facilitates promotion and abroad sales, encouraging companies to internationalize (Fernández & Nieto, 2006; García-Borbolla, Larrán, & López, 2005). Particularly, the Internet favors small and medium companies' internationalization by reducing the sunken or non-recoverable costs necessary to do business abroad (Molla & Heeks, 2007).

Álvarez (2004), Mengistae and Pattillo (2004), Requena (2005), and Wagner (2002) note that export companies are more efficient than others, since the former can face global market's greater competition. Ram (1987) argues that export encourages product specialization, benefiting from economies of scale that come with a wider market and assimilating new technological and organizational norms deriving from participation in world market. Aw, Chung, and Roberts (2000), Blalock and Gertler (2004), Biesebroeck (2005), Fafchamps, Hamine, and Zeufack (2007), Hessels and Van Stel (2011), and Loecker (2007) associate exports with indirect effects that favor learning, the generation of externalities of knowledge, increased competence, competitiveness, and product diversification. However, Clerides, Lach, and Tybout (1996), Eliasson, Hansson, and Lindvert (2009), and Girma, Greenaway, and Kneller (2004) conclude that export companies are more productive than non-exporting companies before exporting, that is, that a self-selection process occurs. Hallward-Driemeier, Iarossi, and Sokoloff (2002) consider that the relation between exports and efficiency is bidirectional. Each variable affects the other. Export improves the resources assignment and, consequently, encourages company's efficiency. However, any assignment improvement and available resources use will also encourage competitiveness improvements that will enhance company's commercial activities abroad.

☆ This work received substantial support from Junta de Andalucía, research project AGR-6132, "Estrategias de mejora de la comercialización de los aceites de oliva" and the Research Chair Extenda (GCC_2011_0101) from Universidad de Jaén.

* Corresponding author. Tel.: +34 953 212635.
E-mail addresses: emoral@ujaen.es (E. Moral-Pajares), amozas@ujaen.es (A. Mozas-Moral), ebernal@ujaen.es (E. Bernal-Jurado), mjmedina@ujaen.es (M.J. Medina-Viruel).
[1] Tel.: +34 683750007.
[2] Tel.: +34 953 212067.
[3] Tel.: +34 675218477.

http://dx.doi.org/10.1016/j.jbusres.2015.01.042
0148-2963/

According to the foregoing, and considering that the this study focuses on Southern European olive oil companies with ICT resources, access to the Internet and a website, two questions arise: Are companies that export more efficient than those that do not?, and what characteristics of companies that export might affect their efficiency level? Specifically, these questions explore how their market experience, their development of an active attitude to export, the percentage of the output they sell abroad, and the ICT resources use, may affect their efficiency.

The study applies the Data Envelopment Analysis (DEA) method to 178 companies registered in the Andalusia region producing olive oil, employ ICT resources, and accessing the Internet and a website. This study did not consider companies without an active Internet presence, according to Meroño and Soto (2007), as its purpose is to verify the relationship between ICT use and efficiency. The study population covers companies exporting in 2012 or in the four previous years.

Data examination confirms that among Southern European olive oil companies employing ICT resources, those exporting are more efficient than those selling their entire output on the home market. In other words, internationalized companies achieve a more productive use of the resources they employ. Contrary to Uppsala school arguments, the company's experience on international markets, company age and percentage of export sales do not affect results. However, having an export department and making appropriate ICT use to close business transactions positively affect efficiency. Therefore, olive oil companies should try to actively export and take advantage of the business opportunities that the Internet affords.

This study has the following structure: Section 2 explains the theoretical arguments and the hypotheses. Section 3 presents statistical data and methods. Section 4 gives results. Section 5 concludes the study.

2. Theoretical arguments

Aw, Chen, and Roberts (2001), Aw and Hwang (1995), and Bernard, Jensen, and Lawrence (1995) indicate that export companies are closer than non-export companies to the efficient production frontier. Less efficient companies lack business opportunities on international markets, where greater competition exists. Ottaviano, Taglioni, and Mauro (2007), in a study of EU companies, conclude that internationalized companies are more productive than those with no contact with international markets. Their results agree with those of Álvarez (2004), Aw et al. (2000), Hallward-Driemeier et al. (2002), Mengistae and Pattillo (2004), and Wagner (2002), among others. According to these arguments, the first hypothesis is:

H1. Export companies are more efficient than those not exporting are.

Studies on international new ventures (INV), including Autio, Sapienza, and Almeida (2000), McDougall, Shane, and Oviatt (1994), Oviatt and McDougall (1994, 1995, 1997), and Zahra, Ireland, and Hill (2000) show that companies can do business successfully with commercial partners from other countries practically from their launching. Certain factors favor recently created companies' crossing national borders to create value within the organization: Greater integration of the respective national economies, lower communication and transport costs, entrepreneurs and/or executives with an international outlook, focus and experience, and information and communication technologies. This reasoning contradicts the Scandinavian theory's underlying logic (Johanson & Vahlne, 1977, 1990; Johanson & Wiedersheim-Paul, 1975) whereby the high cost and uncertainty deriving from obtaining information about foreign markets and taking steps to enter them, forces companies to have a solid national basis for growth before internationalizing. This gradual expansion derives from the company's lifetime experience, decisive for their success abroad. However, the second hypothesis contradicts the Scandinavian theory according to previous arguments, and considering the Spanish economy's high degree of openness (foreign trade in goods and services accounted for 64.52% of the country's GDP in 2012), the ICT resources availability among the study's companies, and the relationship between efficiency and exports in H1:

H2. The age of the export company does not determine its efficiency level.

Export entrepreneurship must involve the whole company. Nevertheless, other country companies showing interest in the product often locate the supplier to meet their own demand. Consequently, these operations' negotiation takes place ex-works and the buyer/importer assumes the costs and expenses (transport, insurance, loading, unloading, etc.) deriving from shipping the goods from the seller's warehouse to the buyer's premises. Therefore, the export company does not decide to export, but the import company. Contrary to this passive, reactive attitude, typical of companies with fewer resources (Cavusgil, 1984), others have a greater internationalization commitment and have a strategy to which they assign human and financial resources. Cavusgil and Naor (1987), Cavusgil and Zou (1994), and Evangelista (1994) consider this commitment a decisive factor for success on foreign markets. In view of the two options for addressing the export challenge, the next hypothesis is:

H3. Companies with an active attitude towards export are more efficient.

For the Uppsala school (Johanson & Vahlne, 1977, 1990; Johanson & Wiedersheim-Paul, 1975), companies' level of international commitment affects the uncertainty of operation in foreign markets. Biesebroeck (2005), Fafchamps et al. (2007), and Loecker (2007) associate company's knowledge on export markets and the resulting information spills over, with its business productivity. The amount of experience allows companies to see opportunities and risks more accurately, reducing the effect of a company's unfamiliarity with environment conditions. Consequently, when international sales reach a sizeable proportion of the output volume the company will improve its capabilities for foreign transactions and their efficiency. These arguments lead to the following hypothesis:

H4. The percentage of output that a company sells on international markets affects efficiency.

Resources and capabilities theory states that having tangible or intangible assets does not create value for the company unless through an appropriate combination and management. Companies can use the information, communication, the contact advantages from the Internet, and the image benefits of owning a quality website to contact with customers in other countries. These factors create competitive advantage and respond to market opportunities, according to the organizations' competences and skills. Therefore, some studies link website content quantity and quality with the company's results (Meroño & Soto, 2007; Zhu, Kraemer, Xu, & Dedrick, 2004). From the above, the hypothesis is:

H5. The quality of an export company's website, indicating the exploitation degree of the tool, affects the firm's efficiency level.

Brynjolfsson and Hitt (2000, 2003) highlight the importance of complementary investments if ICTs may increase the company's productivity to any substantial degree. The combination of ICTs with the changes in the way the company operates can increase some companies' efficiency. Bharadwaj (2000) sustains that the main potential of new technologies is their combination with other existing company resources, that is, with innovations in the organization's operating system. Such innovations involve selling over the Internet, for instance. Drennan and McColl-Kennedy (2003), Whewell and Souitaris (2001), or Zhu et al. (2004) indicate a positive relation between e-business and company profits. Therefore, the hypothesis is:

H6. Concluding business transactions over the Internet contributes to the efficiency of export companies.