

Does the Greek food supply respond to the world challenges?

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Abstract

Although exports of agricultural products contribute to the economic growth of Greece, the export balance remains in deficit. It is therefore uncertain as to whether the Greek food supply properly responds to current global challenges. In this paper we adopt an approach of an integrated international food supply chain and explore the capacity of the Greek food supply chain. Based on a literature review and in-depth interviews with business executives and staff of export certification and inspection bodies we conduct a SWOT analysis. The objective is to generate knowledge on how the Greek food supply chain could become extrovert, and provide recommendations for all members of the supply chain and public authorities. The findings indicate that the most crucial factors that negatively impact export capacity and discourage export initiatives are dispersed beyond the export firm level, and can be categorized in two groups. The first group is connected with the main structural characteristics of the primary production, such as the characteristics of farms and farm owners, barriers and uncertainties caused by natural environment of production, the perishability of the products and the lack of effective collective efforts. The second group is connected with the public authorities and services. These factors include the signing of bilateral phytosanitary contracts with non-EU countries, the bureaucracy in operations of the public services, the registration of exporters where it is needed, the organisation or/and support of the provision of export related information, the insufficient provision of vocational training and

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agricultural research which is necessary at all supply stages and steps, from the farm business level until the consumption.

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1 Introduction

The relationship between export and economic growth has been extensively explored worldwide. Research findings for Greece indicate that short run increases in exports have little impact on economic progress, whereas long term augmented exports can be a key growth generator (Tsitouras, 2016). Although the Greek exports could contribute to exiting the crisis and the survival of enterprises, the export balance remains highly deficient during last two decades. More precisely, in a study of the Directorate-General for Economic and Financial Affairs of the European Commission entitled “The Puzzle of the Missing Greek Exports” (Böwer et al., 2014) it is estimated that Greece exports $\frac{1}{3}$ less than what regular international trade patterns would predict given the size of the Greek GDP, its trading partners and geographical distance. This ranks Greece in the 31st position out of 39 export countries in the competitiveness ranking. The relatively most competitive Greek export sectors are transport services (which includes shipping), tourism (which includes hotels and restaurants) and agriculture. The competitive deficit of Greece is most acute in electrical equipment, machinery and other manufacturing.

It is important for Greece to become extrovert by focusing on foreign markets, both for producing export goods and services and attracting mainly foreign direct investments with an export orientation. This is especially suggested for those sectors that perform well such as agriculture (Böwer et al., 2014; Tsitouras, 2016). Since Greek exports of agricultural products account for 17.1% of the total Greek exports in 2014, it could be expected to substantially contribute in reducing the export deficit and Greece becoming a net exporter. Opposite to this expectation, the Greek agricultural export balance remains in deficit with 1.343 billion euros in 2014 (EU Statistical Factsheet, 2016). Thus, questions are raised in regards to the reasons that drive such a deficit.

The world exports of agricultural products, food and beverages have a high share from the total world exports (>17%), and many researchers explore export performance in agricultural and food sectors. Some examine empirically the export performance of agricultural and food products in combination with a number of non agricultural goods, such as studies of Casey and Hamilton (2014), Maldifassi and Caorsi, (2014) and Freeman et al. (2012). Some solely focus on the performance of certain food and beverage exports (Alteren and Tudoran, 2016;

Hou et al., 2015; Hatab and Hess, 2013; Jraisat et al., 2013; Shukla and Jharkharia, 2013; Fischer, 2010; Mavrogiannis et al., 2009; Maurel, 2009; Karelakis et al., 2008).

Taking into account that the supply of agricultural and food products in foreign markets may be affected by primary production conditions, such as unanticipated weather changes, product perishability, price volatility, isolation of producers from markets, decisions of farm business owners, the effectiveness and efficiency of the export depends on the contribution of all supply chain members, including also farmers. It is apparent that exploring only export performance without incorporating the primary production-related factors, may result in neglecting some useful information. Therefore, a more holistic exploration is necessary by incorporating factors that affect the operation of the supply chain from the farm business level to the export destination and final consumption. This is especially important given that there are no studies to our knowledge introducing the primary production factors in export performance research.

Since the factors that affect the food export performance can be dispersed at supply chain level from “farm to fork”, it would be more useful to go beyond restricting the exploration at export firm level. Thus we assume an integrated international food supply chain and explore the export capacity of the Greek food supply by conducting a strengths-weaknesses-opportunities-threats (SWOT) analysis. The results will support actors of the supply chain in planning their export strategies more effectively. They could also be useful for public authorities, by providing input in regards to their role in facilitating exports and empowering the food supply, and to their role in contributing the international competitiveness to be enhanced and the food reputation in the global market to be protected.

The remaining of the paper is structured as follows. Section 2 presents methodology and Section 3 presents the results of some in depth interviews, results and discussion. Section 4 provides conclusions and propositions for future research.

2 Methodology

Regarding the export supply of agricultural and food products, we notice a variety of international supply chain types. Taking into account the number of actors from the farm to the final consumer, we can observe single actor chains, such as a winemaker who keeps a vineyard and sells wines he/she produces directly to foreign consumers or chains with multiple actors such as the case of a wheat/pasta supply chain which can include five actors: farmers, flourmills, wholesalers, pasta producers and foreign retailers. We assume a typical food export supply chain

presented in figure 1, in which three main actors are involved: farm business, exporting firm and retailers.

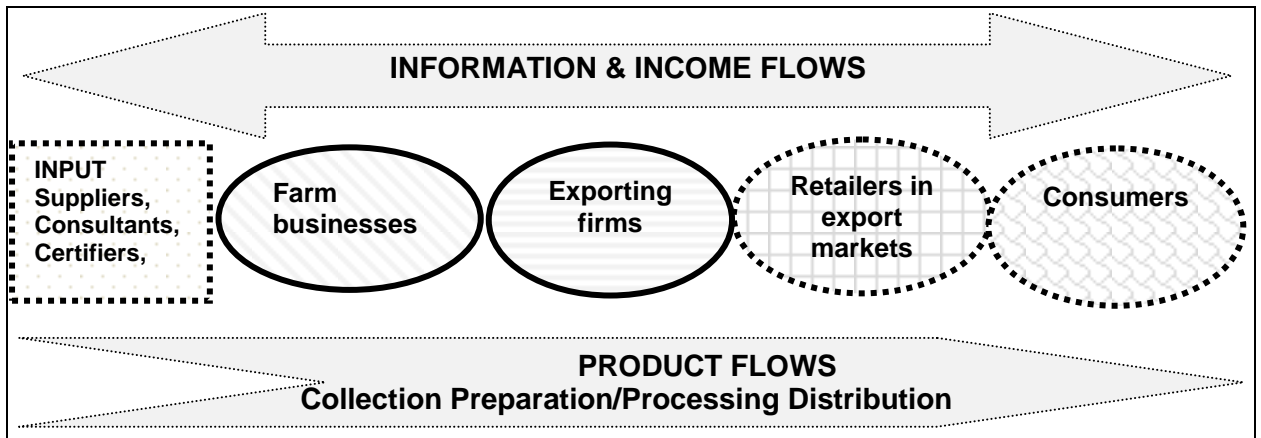


Figure 1. The main actors of international food supply chain

We conduct a SWOT analysis, which is a method that allows firms to capitalise on organisational strengths, minimise any weaknesses, exploit market opportunities and avoid, as far as possible, potential threats. Its adoption has been extended beyond the company level, such as to industries and countries (Helms and Nixon, 2010). It has also been used in food supply sectors at national level. For example, Vrontis and Vignali (2001) use SWOT analysis to investigate the internal and external environmental forces for the dairy milk sector in France, Blery and Sfetsiou (2008) use SWOT analysis to study the promotion and marketing of the olive oil sector in the Greek market and abroad, and Busaidi et al. (2016) review the current quality control systems in the fish supply chain and identify key factors for future development. Thus, we expect the SWOT analysis to enable us to examine the strategic position of the export food supply chain in order to understand and explain the export deficiency.

Regarding the research method, the qualitative research enables researchers to evaluate in a systematic way the internal weaknesses and strengths and the external threats and opportunities. In addition to this, in-depth interviews enable the researchers to lead the discussion into areas that they had not previously considered but which help them to address their research question and objectives (Mayring, 2014; Saunders et al. 2009). In an attempt to collect primary data and identify a large number impacting the food export capacity, we conduct in-depth

interviews and with a directed content analysis, we exploit prior research to develop an initial coding scheme which helps us to analyse the data.

More specific, we first review the relevant literature to understand the effectiveness and efficiency of food exporting efforts. We identify articles published in peer reviewed journals, between 2000 and 2016 with a focus on food and beverage export. We used Google Scholar (www.scholar.google.com) for our search. This practice resulted in identifying and recording a large number of factors that impact export performance of food and non-food firms, which are grouped in two large categories (i.e. internal and external) and subcategories (see table 1).

At the next stage we conducted seven in-depth interviews. The interviews were conducted with executives of five exporting firms located at Central Macedonia – Greece and with two members of the staff of quality control and inspection bodies. Three interviews with executives were conducted during the Agrotica exhibition in January of 2016, and lasted approximately 20 minutes. The questions were broad, to allow respondents as much freedom in their answers as possible, and mainly asked to describe the main drivers of their firms' export success and the main barriers in their exporting efforts. Another two interviews with firm owners took place at the firms' location during March/April 2016. The interviews were longer (approx. 80 min) and thus additional topics were asked. More precisely, we asked them to describe the main strengths of their supply chain and the main drivers of the firms' export success. We further asked them to nominate the main weaknesses of their supply chain and the main barriers in their exporting efforts, the main opportunities they face and the threats for their exporting efforts. Finally, we led the discussion into areas that they had not previously considered but which thought are significant for addressing our research question.

The last two interviews were conducted with two persons working with quality control and inspection services. The interviews took place at their location and lasted approximately 30 minutes. These interviews conducted in order to complement and cross check the data collected from executives.

We applied a qualitative content analysis by dividing material from the interviews into content analytical units. Thus, the results were carefully put into categories and groups according to the points of interest of this study, which are presented in the table 1.

3 Results and discussion

The findings are coded and grouped following the categorisation of previous studies, except for the data concerning the primary production for which we have

not found any remarkable reference. As it is observed in table 1 and table 2, the SWOT analysis gives a rich set of findings indicating that the food export success is the result of a large number of factors specific to the food supply chain. These findings partially confirm and complement the findings of the previous studies exploring the performance of food exporters and those conducting SWOT analysis, for example Karelakis et al. (2008), Mavrogiannis et al. (2008) and Hatab and Hess (2013). The findings are cross checked with those of previous food export studies to ensure validity and reliability of the data, while the findings not previously identified in food export studies are cross checked with the findings of previous studies focusing on Greek agriculture, food production and marketing.

The strengths that the business builds on are presented in table 1. These are connected with the primary production (6 factors), the management and strategy (6 factors), the manufacturing (3 factors), the export skills (5 factors) and the marketing mix (9 factors).

The weaknesses that the business addresses are presented in table 1. These are connected with the main structural characteristics of the agriculture, such as human skills and attitudes, fragmentation of production and distance, quality and quantity uncertainties due to weather conditions and producers' behaviour and the poor performance of collective actions. The weaknesses are also connected with the lack of qualified staff and the lack of trained workers in labor market.

The opportunities and threats are presented in table 2. The opportunities that business considers include rapid technological changes -mostly ICT, new market development, the increasing consumers' interest for higher quality and special innovative product forms, the new products and varieties that emerge, the domestic character of plant varieties and animal races. The threats that the business guards against are connected with the public authorities and public services, the uncertain business environment, the business and position erosion and the brand imitation in export market.

Table 1. Summary of findings on Strengths and Weaknesses

Group of Factors	Factors
STRENGTHS	
Primary production	High quality Innovative or/and Domestic character Certified product Selected farmers –long run relations Support and consultancy to farmers Control in the place of production
Management & strategy	Export strategy Leadership & Innovation Good internal communication Reward systems for staff and workers New markets – high quality demanding Expanded clientele – continually renewed
Manufacturing	Cost reducing technology Enhancing product robustness Innovative methods of preparation
Export skills	High skills staff team including family members Close relations with customers Close relations with collaborators World customer centric approach
Marketing mix:	
-Product	Premium products New design of packaging Adoption to customers requirements Business and product reputation
-Price	High prices/non price competition
-Promotion	Sectoral fairs and exhibitions
-Place	No exclusive representatives –mutual commitment Good foreign market information Low cost transportation
WEAKNESSES	
Primary production	Land fragmentation and small units Quality and quantity risks –fluctuations Farmers' attitudes Farmers' training and skills

	Cooperative and group ineffectiveness Perishability of products
Export skills	Lack of qualified staff in labor market Lack of trained workers in labor market
Product	Small number of product varieties Seasonality of production Risks due to the long distance of target markets

Table 2. Summary of findings on Opportunities and Threats

Group of Factors	Factors
OPPORTUNITIES	Technological challenges in ICT High-growth markets High-potential markets New products and varieties Domestic character of varieties and races Interest for high and special quality
THREATS	No support of primary production by research No sufficient professional training Business/product reputation erosion Brand name imitation Excess bureaucracy of public services Uncertainty due to public authorities No sufficient support by public services Subsidies disturbing the market

4 Conclusion and implications

The analysis conducted help us identify certain factors that can impact the capacity of the Greek food (and beverage) supply chain in order to properly respond to current world challenges and contribute in minimizing the Greek food export deficit. The findings complement those of previous studies, indicating that the factors which negatively impact export capacity and discourage export initiatives are dispersed beyond the export firm level, and can be categorized in two groups. The first group is connected with the main structural characteristics of

the primary production, such as the characteristics of farms and farm owners, barriers and uncertainties caused by natural environment of production, the perishability of the products and the lack of effective collective efforts.

The second group is connected with the public authorities and services. These factors include the signing bilateral phytosanitary contracts with non EU countries, the bureaucracy in operations of public services, the registering of exporters where it is necessary, the organisation or/and supporting of the provision of export related information, the insufficient provision of vocational training and agricultural research which is necessary at all supply stages and steps, from the farm business level until the consumption.

Some implications and suggestions arise from the above findings for export supply chain actors, such as producers and their organizations, input suppliers and exporting firms, as well as public authorities. The supply chain actors should more intensively endeavor to mitigate the negative consequences of the structural characteristics of Greek agriculture and farm businesses on exports and design their plans taking into account the above barriers and threats. They especially are forced to plan their strategies and actions in cooperation with other supply chain actors, in order to more effectively exploit the world challenges, more effectively overcome obstacles and properly avoid the harmful choices and actions in export markets, strengthening also product and (national, local or individual) brand reputation.

Greek public authorities should improve the business environment making it more favourable for export actions and initiatives. It becomes possible by accelerating bilateral agreements, improving the public services connected with the exports, providing more effectively export oriented vocational education and training, supporting agricultural research in order the effectiveness of farm and export businesses to be improved, maintaining and preserving the national and local character of exported food. They should also facilitate and support the introduction of technological, organisational, marketing and process innovations to be properly adapted to Greek production and marketing conditions, design effective land policy, support efforts of supply chain actors to enter in new export markets and support the enhancement of the reputation of the Greek products and brands.

Though the results presented above give certain new findings, these are not sufficient to enable us to rank the factors impacting the export capacity of the food supply in order of their contribution on it. In addition to this, the method we have used may have disregarded certain factors of equal importance (e.g. how extrovert are actors of the Greek supply chain?). These should be subject to future research.

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