

Caiazza, Rosa; Volpe, Tiziana; Stanton, John L.

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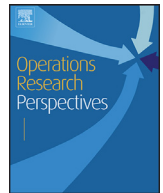
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Global supply chain: The consolidators' role



Rosa Caiazza^{a,*}, Tiziana Volpe^b, John L. Stanton^c

^a Parthenope University of Naples, Italy

^b National Research Council, Italy

^c Saint Joseph's University, USA

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ABSTRACT

Challenges and opportunities of the global market lead agro-food small and medium firms (SMEs) to focus their source of value on production of high quality goods and implementation of flexible and robust supply chains. Despite the relevance of consolidators in the supply chain, few articles demonstrate their role in internationalization strategies of SMEs. In order to fill this literature gap, this article shows factors that affect global success of SMEs and offers some advice to decision makers.

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1. Introduction

Agro-food is one of the main industries of the Italian economic system. Many Italian products are famous worldwide and some of them are globally recognized for their quality. This value leads Italian agro-food products (wine, pasta, tomatoes, oil, mozzarella-cheese, etc.) to be exported to many markets in Europe, USA, Russia and Asia. Recently, new markets characterized by high scale of imports, economic growth, level of development and distribution systems are becoming of great interest for the Italian agro-food industry [1]. Specifically, "The Italian Institute for Foreign Trade" [2] has conducted a study aimed to show a list of highly potential markets for Italian agro-food small and medium enterprises (SMEs). Starting from the 149 emerging countries identified by the International Monetary Fund, large markets near Italy have been identified. Among them, markets that according to UNCTAD, WTO and World Bank data present a good level of imports, absorption capacity, duties, quality of doing business, internal distribution system, level of GDP per capita and expected growth in 2020 have been selected. Thus, the analysis has identified United Arab Emirates, Chile, Malaysia, Qatar, Saudi Arabia, Mexico, Morocco, Serbia, Kazakhstan and Angola as the highest potential markets for Italian agro-food products.

Challenges and opportunities of these markets lead all participants of agro-food supply chain to interact to support diffusion

of Made in Italy in them [3–6]. Specifically, firms that aim to realize internationalization strategies have to develop a global supply chain that overcomes single country barriers [7–10]. However, while trans-national companies (TNCs) realize most of the whole process internally, small and medium enterprises (SMEs) have to create and manage a network with colleagues operating in several countries to implement their strategies. Thus, recent economic studies have emphasized the importance of supply chain management as a process of managing and coordinating activities from the extraction of raw materials to its end of useful life encompassing several organizational boundaries and many countries [11–13].

Specifically, in industries dominated by global companies like agro-food, TNCs operating in distribution sectors that provide services to small and medium enterprises (SMEs) such as logistics, distribution and informative services for exporting their products tend to achieve most of the added value [14–17,7]. For example, trans-national companies of coffee buy the raw product from SMEs of developing countries and then proceed to further process and market the product [18]. In doing so, they maintain control over the entire supply chain and achieve most of the added value [19,20]. In many cases the actual additional processing is rather simple such as in the case of coffee or olive oil, but regardless of the level of processing needed, the SME receives the smallest return of the entire channel.

Thus, small and medium-sized enterprises that want to adopt internationalization strategies in high potential markets by taking advantage of added value have to find a way to produce competitive goods and manage logistics and distribution activities by exploiting potential available space left unattended by the TNCs.

* Corresponding author.

E-mail address: rosa.caiazza@uniparthenope.it (R. Caiazza).

Consequently, agro-food small and medium enterprises have to produce high quality goods not subject to the effects of scale and interact with intermediaries able to provide a complex set of distribution and logistics services for exporting their products abroad [21–24]. Consolidators have to specialize in commercial brokerage, marketing and logistics with a good knowledge of both the point of origination as well as the ultimate market [25]. They have to interact with both producers of home countries and distributors of hosting countries buying products from the former and selling to the latter. Finally, policy-makers have to support both the SMEs' international promotion of their products and the consolidators' activity of global distribution for reinforcing the "Made in Italy" to the world [26].

Despite the relevance of this topic to both the SMEs and Italy's GNP, few studies have focused on it. To fill this literature gap, the article aims to both describe consolidators' role in SMEs' global supply chain and advise decision-makers on how to support "Made in Italy" to the world [27,28]. Thus, the next section provides an analytical investigation of the role of SMEs, consolidators and policy-makers for internationalization of Italian agro-food SMEs in high potential markets. The last section presents some conclusions and discussion.

2. Methodology

Our empirical research is based on case studies of small and medium Italian producers of agro-food goods operating both in Italy and abroad. Data collection for these cases came from face to face interviews. In most instances, the interview was conducted with multiple managers from the host organization. All respondents were the main person in charge of strategy, generally being the founder or one of the directors. The average interview lasted over four hours with the shortest interview lasting a little over an hour and the longest taking over ten hours. All interviews were conducted face-to-face and promised confidentiality to facilitate candid responses. During each interview, a semi-structured interview guide was used. The guide was divided into questions on:

1. *SMEs' internationalization strategies*
2. *Consolidators role in global supply chain*
3. *Policy-makers' actions.*

The interviews and observations were transcribed and summarized, and the results were fed back to the respondents for validation and verification. Then these reports were coded according to the literature review summarized in the previous section. To address inter-coder reliability, each of the authors read the transcriptions separately so as to develop an independent point of view, and then a comparison among the authors was conducted. When evaluations by the authors were conflicting, a discussion among the discordant authors was conducted until a final agreement was reached.

3. SMEs' internationalization strategies

The analyzed companies reported that they export 60% of their production on average (quantity). Most companies had started their internationalization processes two decades before had their product going to the international market. This shows that the internationalization process is actually an established strategy of agro food SMEs. Reasons that have pushed companies to start an internationalization process are the need to find new markets for increasing profits, the need to defend the domestic market from foreign competitors and the possibility of taking advantage of Government incentives.

Most of the SMEs decided to go abroad exporting their products through commercial intermediaries. Many of them already oper-

ating are Switzerland (geographically close), several EU countries (Germany, United Kingdom, Belgium, Netherlands), other northern Europe and Eastern Europe (Czech Republic, EU, non-EU, as both the Russia), and also some important other continents (USA, Canada, Japan, Australia, Republic of South Africa). More than half of the companies in the sample had planned to enter in new potential markets: United Arab Emirates, Chile, Malaysia, Qatar, Saudi Arabia, Mexico, Morocco, Serbia, Kazakhstan and Angola. These countries offer SMEs the opportunity to increase profits, exploit economies of scale, grow corporate size and obtain new and significant market share.

In planning to internationalize in these countries, most of SMEs identified the quality of their products as a success factor, which accompanies the importance of Made in Italy. The logistics and distribution service were identified as a second factor of great relevance. Companies providing these services can reduce internationalization obstacles due to difficulty in controlling prices, high distribution costs, lack of information about the target markets risk of unfair competition, difficulty of dealing with a cultural diversity and local barriers (tariff, currency, techniques, etc.).

However, of the companies that were analyzed, a large number were unable to operate in high potential markets because of the lack of availability of service providers for complex services such as logistics and distribution.

4. Consolidators' role in global supply chain

Consolidators are agents, export companies, consortium or brokers that provides a complex set of services to agro-food SMEs. These services are carried out by receiving orders from big foreign buyers, identifying local suppliers, consolidation, collection of many goods to be sent to the same market and placing of products on the market. The consolidator must, therefore, know the all issues related to both the origination and destination markets, have the trust of foreign buyers in order to ensure stable relations and have many contacts with local SMEs to ask for supplies of goods.

In order to enter foreign markets, the consolidators have to know the laws, regulations, rules and the culture of destination countries. Generally, major foreign buyers do not want to interact with a lot of SMEs, but are interested in a long-term relationship with a broker who is able to bring together many orders from a cross section of SMEs, guarantee the quality of required goods and take care of providing all documentation able to certify the quality of goods according to market standards. The compliance with the agreements in time creates a positive relationship with broker and consolidator thus increasing the probability that a buyer will contact the consolidator when they need additional goods. For example if a broker has provided an example of pasta to a foreign buyer, that buyer may ask for other products from the same broker such as salami. Therefore, in order to protect relations with large buyers, consolidators have to guarantee quality of products, support risk of transportation and replace goods that do not arrive intact at the destination.

Consolidators operate through web pages where buyers and sellers have to be registered. Once collected the orders through the web consolidators send the request to all SMEs registered as suppliers of food goods. Consolidators can use on-line procedures launching a purchase proposal to all the producers signed on their web page or use a direct call to local producers negotiating directly for the price and quantity of the goods.

Once consolidators have purchased the goods, they take care to ensure that products reflect the standards demanded by the buyers' markets by unifying the shipments in the same market, completing all the procedures and paying all fees for entry into the foreign market. The consolidated products are sent to one buyer or to several buyers in the same market. Goods collected from various

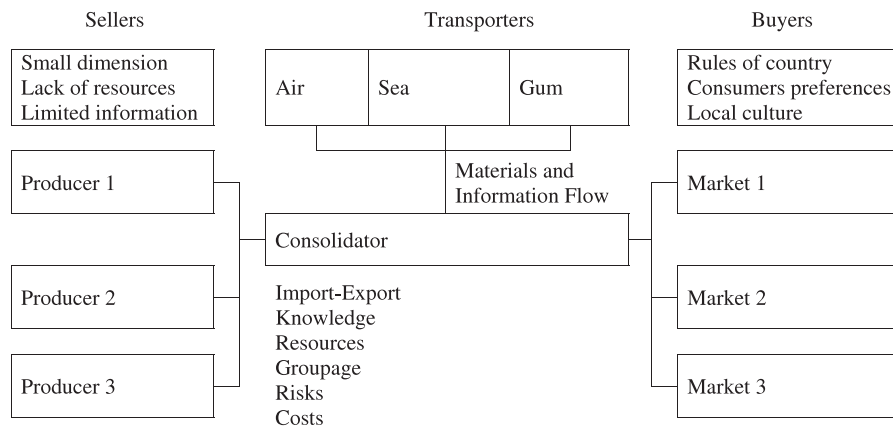


Fig. 1. Consolidators' role in global supply chain.

producers are grouped in containers to be sent by air, sea or road to the destination market (Fig. 1).

Most consolidators do not have their own ships, aircraft or other means of transport and therefore use cargo companies to further consolidate and send their products. International shipping services by air, which are the most expensive, and those by sea, which are the cheapest, are managed directly by the transportation companies, especially when there is a volume of goods sufficient to fill the entire load. Thus, consolidators have to have a vast network of relations with operators in air, maritime and road transport to offer competitive transport costs and combine orders from various clients aimed to fill loads. Consequently, consolidators' international transport systems are moving from an initial structure built on vast networks of local affiliates to a network structure built on large hubs.

The sea transport can be either full container load (FCL) or less than container load (LCL). The full container load concerns shipments with full containers from and to all destinations with high levels of security, strict safety standards and precise timely procedures. Contracts with companies of major foreign ports allow consolidators to plan different services and departures every week at competitive prices. In less than container load (LCL), shipments are consolidated in the weekly loads from and to all destinations. The consolidators offer customers the possibility to operate international shipments without the total filling of containers for sea transport to and from every country in the world. The network of agents located in every major international seaport guarantees the treatment of goods and the fast handling of practices related to shipments abroad. All international shipments in containers are handled with efficiency, care and speed.

Road transports are generally structured as full truckload (FTL) or less-than-truckload (LTL). The full-truckload (FTL) concerns full load transport on a truck for a single customer. The less-than-truckload (LTL) combines multiple customer loads and to consolidate multiple workloads. The shipping of mixed loads is a service that consolidates various small consignments to create a full load. The model employs a network of warehouses, where the partial loads are collected from different customers. One of the most efficient forms of mixed loads is the hub-and-spoke network where individual shipments are transported by regional warehouses to a central hub where the loads are sorted and grouped.

Through this process, consolidators export large quantities of agro-food products at a low cost. They become critical actors for small and medium-sized enterprises wishing to bypass the problem of small size and shipping risks to enter global markets. Consequently consolidators are commercial figures relevant to sell products of SMEs on the international market. Their success is based on their ability to manage information and communication

technologies (ICT), supply chain, intermodal transport and containerization to collect and process large orders of goods quickly in the global markets, consolidate various production lots from multiple vendors and take all the risk to give them to buyers of final markets.

Given the complex set of services consolidators provide to SMEs, they can offer important and relevant service that can affect the success of agro-food SMEs' internationalization in high potential markets. However, interviews show that the greatest limiting factor in Italy is the small number of consolidators that are able to introduce their products in high potential markets. In Italy, in fact, there are few specialized consolidators able to connect national producers with large foreign buyers in a systematic way and with a high degree of efficiency. Finally, interviewers suggest some actions policy-makers have to take for supporting Made in Italy in the world.

5. Policy-makers' actions

The analyzed companies reported the actions that policy makers have to take for promoting Italian agro-food system in high potential markets. An early form of intervention may include actions aimed to promote trade liberalization through a master plan of bilateral and multilateral agreements permitting national firms to export to markets with fewer barriers to entry.

Some desirable actions to reduce barriers to trade include negotiation of the Common Agricultural Policy and Common Fisheries Policy 2014–2020; creation of a map of barriers of high potential markets; reduction of barriers through negotiation with these countries of bilateral exchange agreements; and improvement of production processes according to standards demanded by these countries.

A second set of operations concerns the sharing of information and knowledge to enable companies to compete abroad. The best opportunities for products appear to be in markets where access is free. It would therefore be desirable for SMEs to implement actions aimed to increase their information gathering on high potential markets that can help to select the most suitable market for their products. Some desirable actions include the development of some platforms for the dissemination of information, such as web portals. Moreover, it is also likely to show opportunities for SMEs in key markets through cooperation with commercial agents and experts by participating at events managed by industry organizations.

Another action is related to financial and insurance issues. The ability to insure payments is the main barrier to foreign sales. In addition to the support offered by SACE in terms of export credit, businesses may be encouraged to work abroad with the possibility of having new insurance and financial support.

Another aspect on which policy-makers can act concerns agreements for sanitary certifications. Several institutions are involved in providing official certificates to agro-food companies that export in non-EU countries. Export-certificate requirements are defined by the importing country and vary according to the assessment made by that country. Certifications required from non-EU countries are complex and change over time based on socio-economic evolution. Policymakers could negotiate simplifications and standardization of such certifications. Desirable actions in this regard include greater coordination between authorities, improving communications about certification services, and promotion of best practices in service management certification. An improvement of services offered by authorities that provide certification for export in non-EU countries is also required. A positive step to increasing efficiency would be to replace existing certifications with an electronic interface that allows exporters to directly access the certification material, where possible. It could similarly be a positive step for the SMEs to create an agency dedicated to coordinate all institutions dealing with export certifications for reduction of cost and times and simplification of bureaucratic procedures.

Another important action to enter foreign markets could consist of supporting Italian consolidators in being legitimate to operate in high potential markets. These actions have to be aimed to support the Italian consolidators' participation in international trade fairs and commercial missions abroad and to push them to assume the risk of accessing international markets.

The last action is promotion of quality and the reputation of "Made in Italy" abroad. One suggestion is to create the figure of "Italian ambassadors" who would be able to promote the excellence of Italy food and beverage at international level. This does not need to be a specific person but could be an ideal Italian in the same way the Colombian coffee created "Juan Valdez". The message must be uniform across all food groups with the aim of creating a showcase for Made in Italy in major world events, create some local brand and reduce the possibility of imitation of Made in Italy. However the success of the promotional program must include advice to producers to obtain national and European certifications of Made in Italy and to work with the Office of intellectual property protection in order to protect domestic products included in the lists of EU GIs.

6. Conclusions and discussion

In a market dominated by trans-national companies, agro-food small and medium-sized enterprises can compete globally by exploiting potential spaces left free from the large multinationals. Thus, SMEs have to produce high quality goods and find a way to export them to high potential markets. Specifically, the analyzed companies reported the importance of consolidators to sell their products in high potential markets. However, interviewees also indicated that the greatest Italian limit is the small number of consolidators able to operate in these markets. In Italy, in fact, there are very few specialized consolidators able to connect national producers with large foreign buyers in a systematic way and with a high degree of efficiency.

Despite the fact that the Italian Department of Trade and Industry has already taken several actions aimed at promoting "Made in Italy" to the world, analyzed companies indicated that these are still inadequate and some actions are still required. Hence in conjunction with trade associations, policymakers have to define a medium term plan able to support the development of both SMEs able to produce high quality products and consolidators able to export them to international markets. This paper has two main contributions. First, it contributes to the existing literature on global

supply chain demonstrating the relevance of consolidators for the global competitiveness of agro-food SMEs. Secondly, it suggests new policies that decision-makers have to take for implementing a medium term plan able to support consolidators' role in the internationalization of SMEs.

References

- [1] Caiazza R, Richardson A, Audretsch DB. Knowledge effects on competitiveness: From firms to regional advantage. *J Technol transfer* 2015. doi:10.1007/s10961-015-9425-8.
- [2] ICE, Oltre I BRICS: Nuovi mercati per il made in Italy, The Italian Institute for Foreign Trade, Bologna, 2013.
- [3] Xu L, Beamont BM. Supply chain coordination and cooperation mechanisms: An attribute-based approach. *J Supply Chain Manag* 2006;42(1):4–12.
- [4] Leat P, Marr P, Ritchie C. Quality assurance and traceability—the Scottish agri-food industry's quest for competitive advantage. *Supply Chain Manag Int J* 1998;3(3):115–17.
- [5] Freiboth HW, Goedhals-Gerber L, Van Dyk FE, Dodd MC. Investigating temperature breaks in the summer fruit export cold chain: A case study. *J Transp Supply Chain Manag* 2013;7(1):7.
- [6] Milgate M. Supply chain complexity and delivery performance: an international exploratory study. *Supply Chain Manag Int J* 2001;6(3):106–18.
- [7] Caiazza R, Volpe T. How campanian SME can compete in the global agro-food industry. *J Food Prod Mark* 2013;19(5).
- [8] O'Keefe M. Establishing supply chain partnerships: lessons from Australian agribusiness. *Supply Chain Manag Int J* 1998;3(1):5–9.
- [9] Loader R. Assessing transaction costs to describe supply chain relationships in agri-food systems. *Supply Chain Manag Int J* 1997;2(1):23–35.
- [10] Taylor DH. Strategic considerations in the development of lean agri-food supply chains: a case study of the UK pork sector. *Supply Chain Manag Int J* 2006;11(3):271–80.
- [11] Kilgore M, Joseph A, Metersky J. The logistical challenges of doing. *Supply Chain Manag Rev* 2007;37.
- [12] Rademakers MF, McKnight PJ. Concentration and inter-firm co-operation within the Dutch potato supply chain. *Supply Chain Manag Int J* 1998;3(4):203–13.
- [13] Islam SB, Habib DM. Supply chain management in fishing industry: A case study. *Int J Supply Chain Manag* 2013;2(2).
- [14] Sahay BS, Gupta JN, Mohan R. Managing supply chains for competitiveness: the Indian scenario. *Supply Chain Manag Int J* 2006;11(1):15–24.
- [15] Sheu C, Lee L, Niehoff B. A voluntary logistics security program. *Supply Chain Manag Int J* 2006;4(11):363–74.
- [16] Stanton JV, Burkink TJ. Improving small farmer participation in export marketing channels: perceptions of US fresh produce importers. *Supply Chain Manag Int J* 2008;13(3):199–210.
- [17] Veena A, Babu KN, Venkatesha HR. Supply chain: A differentiator in marketing fresh produce. *IUP J Supply Chain Manag* 2011;8(1).
- [18] Caiazza R, Volpe T, Stanton JL. Innovation in agro-foods: A comparative analysis of value chains. *J Int Food Agribus Mark* 2016; 0897-4438 (Print), 1528-6983 (Online).
- [19] Caiazza R. Explaining innovation in mature industries: Evidences from Italian SMEs. *Technol Anal Strateg Manag* 2015; ISSN 0953-7325 (Print), 1465-3990 (Online).
- [20] Hobbs JE, Kerr WA, Klein KK. Creating international competitiveness through supply chain management: Danish pork. *Supply Chain Manag Int J* 1998;3(2):68–78.
- [21] Collins A, Henchion M, O'Reilly P. The impact of coupled-consolidation: experiences from the Irish food industry. *Supply Chain Manag Int J* 1999;4(2):102–11.
- [22] Cohen MA, Huchzermeier A. Global supply chain management: a survey of research and applications. In: *Quantitative models for supply chain management*. US: Springer; 1999. p. 669–702.
- [23] Bhagat D, Dhar UR. Agriculture supply chain management: a review. *IUP J Supply Chain Manag* 2011;8(3).
- [24] Caiazza R, Volpe T. Interaction despite of diversity: Is it possible? *J Manag Dev* 2015;34(7). ISSN 0262-1711.
- [25] Mandal S. Supply chain risk identification and elimination: a theoretical perspective. *IUP J Supply Chain Manag* 2011;8(1):68–86.
- [26] Caiazza R, Volpe T. M&A process: A literature review and research agenda. *Bus Process Manag J* 2015;21(1). ISSN 1463-7154.
- [27] Caiazza R, Volpe T, Audretsch DB. Innovation in Agro-food System: Policies, actors and activities. *J Enterp Commun: People Places Glob Econ* 2014;8(3): 180–187. ISSN 1750-6204.
- [28] Caiazza R, Audretsch DB, Volpe T, Singer J. Policy and institutions facilitating entrepreneurial Spin-offs: USA, Asia and Europe. *J Entrepreneurs Publ Policy* 2014;3(2).