Can social networks contribute to the development of short supply chains in the Spanish agri-food sector?

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Abstract

The food industry is the first industrial branch in Spain, with Spanish consumers purchasing food from different sources, mainly via traditional/long chains. However, there are consumer segments seeking for more direct relationships with food producers, because they want to be informed about their food's origin and production model. So, dealing directly with consumers by creating short food supply chains could be a great opportunity for food small and medium enterprises. In this context, the huge increase in the use of social media offers producers the potential to build new short chains for promoting and selling their products in a rapid, low-cost and direct way. Benefits of social networks in this regard are various: they may contribute to reducing market margins by enhancing direct sales; they facilitate the identification of customers' profile, their preferences and the way they perceive certain products.

Keywords: *social marketing, e-marketing, small and medium enterprises, short food supply chains.*

Résumé

Le secteur alimentaire est le créneau porteur de l'industrie espgagnole. Les consommateurs espagnols achètent des produits alimentaires provenant de différentes sources, distribués surtout à travers les circuits traditionnels/longs. Cependant, il y a des segments de consommateurs toujours à la recherche d'une relation plus directe avec les producteurs, car ils veulent être informés de l'origine et du mode de production de ces produits. Ainsi, traiter directement avec les consommateurs en créant des circuits courts d'approvisionnement alimentaire pourrait être une excellente occasion pour les petites et moyennes entreprises. Dans ce contexte, l'augmentation sensible de l'utilisation des médias sociaux offre aux producteurs la possibilité de construire de nouvelles chaînes courtes pour promouvoir et vendre leurs produits d'une manière directe, rapide et peu coûteuse. Les avantages des réseaux sociaux sont divers : ils peuvent contribuer à réduire les marges du marché en améliorant la vente directe; ils facilitent l´identification du profil des clients, leurs préférences et la manière dont certains produits sont perçus.

Mots-clés: marketing social, e-marketing, petites et moyennes entreprises, chaînes courtes d'approvisionnement alimentaire.

1. Introduction

The food sector is one of the most important sectors of the economy, encompassing agriculture, the food industry, retail, and eventually, all members of society as consumers (Lehmann *et al*., 2012). The European food and beverage sector´s turnover was 1,048 billion Euros in 2012, and it employs 4.2 million people (FoodDrinkEurope, 2014). The sector is crucial in the European economy as Europe accounts for the largest share in the global food and beverage industry (FoodDrinkEurope, 2014). In addition, the EU has 286.000 agro-food enterprises – 99.1% of which are small and medium enterprises (SMEs) with fewer than 250 employees – representing 51.6% of the total sales of the agri-food sector and two-thirds of employment (FoodDrinkEurope, 2015).

The Spanish food industry is ranked fifth in terms of the net sales value of the agri-food sector in the EU after Germany, France, Italy and the United Kingdom (MAGRAMA, 2014). In Spain, the food and beverage industry is considered the first industrial branch, according to the latest statistical survey (INE, 2013), representing 20.6% of net sales, 18.2% of employed people and 15.3% of the added value.

In 2013, total net sales amounted to 91,450 million Euros, representing an increase of 1.4 % over the previous year. Meat industry represented 22.1% of that figure, followed by animal feed (9.7%), fats and oils (9.4%) and dairy (9.3%) (MAGRAMA, 2014).

The Spanish food industry shows a high degree of atomization. However, in recent years the food marketing and distribution have experienced remarkable changes, mainly in terms of concentration processes that have taken place mostly among large food companies (MAGRAMA, 2008). These changes had important and serious consequences on the configuration of the producer-distributor relationship, since it moved from a situation in which manufacturers dominated the conditions of purchasing of their products, to a new context in which distributors have enhanced their bargaining position (Oubiña, 2000) and got the capacity of driving the demand. Therefore, this situation results in a state of dissatisfaction for producers, who do not find a stable market and a return for their activity, thus making little profit or even incurring losses.

Commercial distribution is increasingly changing and complex both in the Spanish market and in the international environment. Most of these changes are taking place because consumers are demanding a variety of products and services with the highest quality, best price, and added value.

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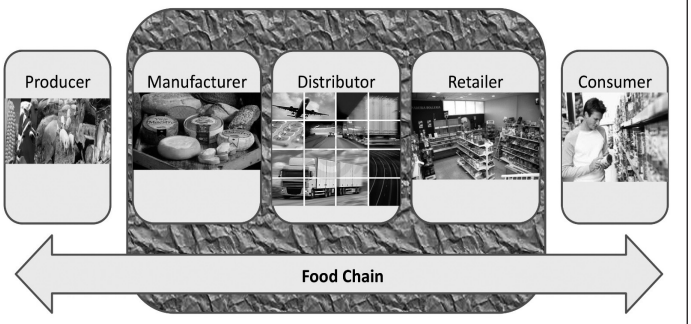
They are also seeking for more information with respect to origin, safety and wholesomeness of the purchased food (Röhr *et al*., 2005), a trend linked to the increasing consumer concern about environment and health (Mesías *et al*., 2011).

Spanish consumers use different shopping chains to purchase food and drinks. In this regard, the relative importance of supermarkets (53.6% of market share in 2012) has gradually increased compared with specialized shops (22.7% of market share) that along with other formats have a less noticeable presence. However, certain differences can be found in the choice of the point of purchase by the Spanish consumers depending on whether they are to buy fresh or processed food. In the first case, specialized shops remain one of the most preferred choices, with a market share of 31.1% in meat and 40.6% in fresh fruits. For processed food, free service outlets have become clearly the preferred choice for households (supermarkets account for 70.7% of the sales of milk or 59.2% of sales of olive oil) (MERCASA, 2013). Moreover, consumers have started to use other formats that weren't common until recently, like delicatessen stores, 24 hours shops and sales on the Internet (MAGRAMA, 2008). On the other hand, 70% of purchases are made via traditional (long) chains where hypermarkets or supermarkets are the final link between producer and consumer (Figure 1).

Figure 1 - *Traditional marketing food chain.*



Nevertheless, there is a sector of the population seeking more direct relationships with the producer, claiming their right to choose the products they consume and to be informed about the source and model of production (MAGRAMA, 2013). So that, it would be a good opportunity for traditional enterprises to deal directly with consumers by creating short food supply chains (SFSC), eliminating the passage through several links in the food chain, thus facilitating the traceability of food products and a better price transmission between producers and consumers.

Within this context, the aim of this review is to summarize the role that SFSC could play as an opportunity for SMEs in the agri-food sector. Moreover, to highlight a new perspective relying on social media platforms as potential short supply chains for SMEs. The specific questions to address include: (1) How can SFSC be defined? (2) What are the main reasons of consumer interest in short chains? (3) How could social media applications serve as a short food supply chain?

The paper is structured as follows. It first defines the concept of short supply chain and describes the main perspectives identified in the literature. Subsequently, the paper develops a proper definition of a short supply chain in the context of online and offline models. Next, the paper presents the existing situation concerning the online marketing practices in food SMEs and highlights the empowering role of information and communication technologies. The paper concludes with a reflection about the different food products/food sectors that could take advantage of both, the creation of SFSC and a wider use of social networks as a marketing tool within those chains.

2. Concept of short supply chain

A literature review shows different definitions of short supply chains. For instance, the definition adopted by the European Council (Santini and Gomez y Paloma, 2013) is "a supply chain formed by a limited number of economic agents, committed to cooperation, local economic development and socio-economic relations between producers and consumers in a close geographical area".

Also, it is worthy here to differentiate between two main types of short supply chains. On the one hand, we find the direct short chains, where the number of intermediaries is zero and on the other hand the indirect short chains, which only have a single intermediary between producers and consumers (Mundubat, 2012).

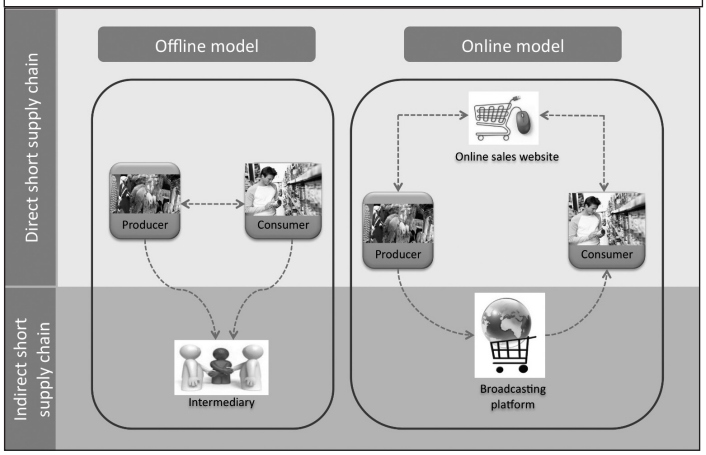
The marketing via these short supply chains can be done according to different marketing structures. We can differentiate those structures according to the use of the Internet as online and off-line short supply chains. The online chain allows either the possibility to purchase products directly through the network or just offers support so that consumers are put into direct contact with sellers. Online chains may include: i) online platforms, such as the ones used for broadcasting purposes, (the user only has access to the information and contact details of the producer) and those that allow purchasing online directly; and ii) on-line sales websites of producer or manufacturer where electronic commerce takes place (MAGRAMA, 2013).

The offline short channels are those which do not offer their products via the web. Within the so-called offline chains, there are various purchasing outlets such as producer market, direct sale shops, door-to-door shipping and consumer groups.

According to the above, a more inclusive definition of a short supply chain would be the one in which the number of intermediaries is equal to or less than one whether the transaction takes place through online or offline platforms (Figure 2). This concept is widely applicable to the food sector, in which case we would refer to short food supply chains.

In terms of consumers' interest in SFSC, there is evidence that they have favorable impacts on both social and economic levels. They also favor interaction and direct connection between farmers and consumers (Canavan *et al*., 2007; Migliore *et al*. 2015) thus promoting the develop-

Figure 2 - *Information flows in short food supply chain models.*



ment of confidence and awareness of social capital (Chiffoleau, 2009). This can also result in the development of community sense and co-existence (Abatekassa and Peterson, 2011) and can even cause behavioral changes (Cox *et al*., 2008) in eating and shopping habits, enhancing social and environmental awareness. Moreover, economic benefits can be noticed due to rural development and economic regeneration, as local agricultural systems and short chains have a greater effect on the local economies than the long ones, with implications also for maintaining local employment especially in rural areas (Santini and Gomez y Paloma, 2013).

In addition to the aforementioned social and economic impacts, the literature review indicates that quality concerns are among the main reasons of consumers´ interest in short chains (Sage, 2003; Abatekassa and Peterson, 2011; Migliore *et al*., 2015). In this sense, the consumer can receive products embedded with information about production system, origin, and specific quality. This would help him/her to make value-judgments about the product (Marsden *et al*., 2000; Abatekassa and Peterson, 2011). Furthermore, the reduced distance between the primary producer and the final consumer would enhance the creation of mutual trust and of differentiated products (Sage, 2003).

Thus, it would be of great value for food enterprises to take part in this type of marketing. They can even use short and long food chains combined in order to get the greatest benefit and reduce the risk.

Marsden *et al*. (2000) and Renting *et al*. (2003) identify three main types of short food supply chains (face-to-face, spatial proximity and spatially extended) which are briefly defined in the following paragraphs.

I. Face-to-face, where producers sell their products directly to the consumer on a face-to-face basis. Examples of face-to-face SFSCs are farmers' markets, farm gate sales, pick-your-own, and box schemes.

II. Spatial proximity, where products are produced and sold through local market channels in the specific region of production including farm shop groups, food service outlets, local food retailers and consumer cooperatives.

Other examples reported in the literature about spatially proximate SFSCs are Community supported agriculture (CSA) (Brown and Miller, 2008), Solidarity purchasing groups (GAS) (Migliore, 2014) and Associations for the maintenance of peasant agriculture (AMAP). All these types could vary according to different regions and countries, but they share the same essential principles whereby subscribers receive a share of the harvest in return for money and labor (Santini and Gomez y Paloma, 2013).

III. Spatially extended, where products are sold not only to local consumers but also to consumers in other regions. In this case labeling and certification programs could be used to differentiate these products emphasizing the quality dimension (Abatekassa, 2011) such as in the case of Fair trade and Protected Designation of Origin (PDO).

Already in 2013, and based on a study on short commercialization chains in the agri-food sector, the Spanish Ministry of Food and Agriculture started promoting food marketing via short supply chains (MAGRAMA, 2013). To this end, it recommended SMEs to bet on the development of marketing using websites or mobile phone applications, along with building the presence in social networks, which can be considered as affordable and not overly complicated tools for non-experts (MAGRAMA, 2013).

Despite the high potential, some barriers can also limit the implementation of e-commerce[1] in the agri-food sector. These constraints are mainly linked to the uncertainty and lack of trust among stakeholders in terms of security issues. According to Haas *et al*. (2016) and Canavari *et al*. (2016), customers perceive electronic purchases as more risky than the conventional ones. This may be due to the impersonal nature of online transactions and to the lack of direct contact between businesses and consumers, which can generate distrust among possible customers (Canavari *et al*., 2010). Therefore, the creation of trusted relationships in an online environment (e-trust) is a key element for the adoption and development of e-commerce (Canavari *et al*., 2010; Lehman *et al*., 2012).

The inability to experience the product and to judge quality prior to purchase is also a main barrier for e-commerce growth. The major limitation associated with online experience is the limited sensory input compared with direct experience (Daugherty *et al*., 2005). Many consumers prefer to touch, feel, smell or even taste the product before they purchase it. Hence, it is likely that consumers with high hedonic shopping motivations will prefer more direct interaction and go for traditional stores (Sarkar, 2011). In this context, and even though e-commerce could be a useful short supply chain, the relationship between producers and consumers is still weaker when compared with some of the aforementioned types of SFSCs (farmers' market, community supported agriculture, etc.). In addition, e-commerce still needs to be understood and culturally ac-

[1] Within the overall concept of e-business (the development of business via the Internet that could include buying and selling goods and services, along with providing technical or customer support) e-commerce is limited to the selling of goods and services on line. Both terms are, however, often used in an undifferentiated way.

cepted by the socio-economic actors who are very accustomed to face-to-face business (Briz *et al*., 2016).

The lower improvement of delivery service in agri-food e-commerce, when compared with other aspects of the web supply chains, is also identified as a limitation to its development (Chen *et al*., 2014). In an online transaction, consumers are left empty-handed for some time after making a purchase. They may be unsure about delivery dates or product packaging during transport. This problem could be the most difficult barrier for e-commerce in the case of perishable food products.

3. Agri-food e-marketing

E-marketing is a subset of e-business that uses electronic means to perform marketing transactions and accomplish certain marketing goals for an organization (Petrovic, 2010). It therefore implies the application of digital technologies to contribute to the marketing activities of an enterprise so as to strengthen the relationship with customers and create added value for the product. It includes both direct response marketing and indirect marketing elements, and uses a range of technologies to help connect businesses to their customers (Tsekouropoulos *et al*., 2011).

The internet can be used to facilitate purchase transactions among all kinds of actors: among consumers, among businesses, between businesses and consumers (Grunertand Ramus, 2005). Studies dealing with consumer behavior in internet shopping concluded that people have a wide range of different motivations and different approaches which trigger their behavior and which include not only the pros of convenience, financial benefits and easy information accessing but also hedonic aspects of e-commerce like enjoyment, normative beliefs and self-efficacy (Joines *et al*., 2003; Shang *et al*., 2005; Mandilas *et al*., 2013).

Over the last decade, online shopping has provided an open window for producers to market their products and has become one of the most rapidly growing forms of shopping (Zhu *et al*., 2014). Potential uses of e-marketing are interesting for the agri-food sector due to both globalization in markets and fragmentation in supply (Hausen *et al*., 2006). However, adoption of this approach by businesses is low (Canavari *et al*., 2016), in particular by small- and medium-sized enterprises which represent the majority of agricultural production (European Commission, 2005; Fritz and Canavari, 2008; Bewley and Russell, 2010; Canavari *et al*., 2010; Lehmann *et al*., 2012). E-commerce in Spain amounted to about M€ 16,000 in 2014, with a marked increase with respect to 2013 and 2012 (24.7% and 43.4%, respectively) (CNMC, 2014). The food sector turnover represented only 2.8% of the whole Spanish e-commerce in 2014 (with a similar figure in the previous year), much lower than the corresponding figure in other economic sectors, such as tourism (18%) and air transport (9.6%) (Marketing4Ecommerce, 2013). In particular, the food sector constituted 4.0% of the total number of e-commerce transactions (CNMC, 2014).

E-commerce development in the agri-food sector is still rather limited in Spain, with only 18% of consumers having purchased food on-line at least once in 2015 (Aral, 2016). More specifically, when breaking down this figure we find that fresh food is the least on-line purchased category (13%), although more than 40% of food consumers used the web to look for information or compare prices (Aral, 2016). This highlights the potential of internet food marketing, as those e-browsers should easily become future e-consumers.

According to the e-Business Index 2006, calculated by e-Business Watch (European Commission, 2007) for 10 different sectors in 10 EU countries, the food sector is found in the lowest two ranks in this benchmarking which express e-business adoption as "a percentage of firms in a sector with a certain activity", regardless the size of the firms (European Commission, 2007). Given that the European food sector, as it was mentioned before, is dominated by small- and medium-sized firms, we can interpret that these results mainly reflect the SMEs' relationship with new technologies, as many small companies still face diverse problems to get digitally connected with their suppliers and customers.

The food sector, in general, needs to be efficient. Efficiency, process control, and consumer communications are all closely related to the use of information and communication technology (Lehmann *et al*., 2012). In a small enterprise, information management, as a part of an e-business strategy, can be effectively and efficiently achieved with the use of less sophisticated and less expensive systems compared with those used by large companies (European Commission, 2007).

Moreover, the conclusion of the European e-business report (European Commission, 2007) showed the great potential of e-business for SMEs, which could be noticed as follows:

1. While SMEs need to cooperate, for example by building networks, information and communication technology (ICT) usage facilitates cooperation in many ways (e.g. through project management tools, or online collaboration tools for design).

2. Also, current technological developments hold opportunities for small companies, for example, Voice-over-IP telephone and mobile e-business solutions. Moreover, ICT companies are increasingly addressing the SME market by developing affordable, small-sized solutions such as Enterprise Resource Planning (ERP) which are computer systems organized for resource administration in an organization, or Customer Relationship Management (CRM) suites which are computer systems to support the management of relations with customers, sales and marketing. Such software can include several features to manage the company's sales and customers.

3. Finally, many SMEs are forced to expand their market area. E-commerce can be an opportunity -maybe the only way- for them to go global.

4. Social networks as an e-marketing tool

Recently, the spectacular development of internet use – above all the Web 2.0 and online social networks – has aroused great interest in the marketing sector. Many companies have decided to incorporate social marketing (Marketing via social networks) to support their commercial activities (Mata and Quesada, 2014). From a market perspective, social networks can be considered as collections of in-

dividuals which create what can be called a "Virtual Market". This situation presents valuable opportunities to do business based on the potential benefits that a company can get from such networks to promote its brands or products (Dooley *et al*., 2012; Mata and Quesada, 2014). From this perspective, both online social networks and e-commerce may be considered complementary e-marketing tools and not substitutes.

The proliferation of social media applications such as online communities, social networking sites or blogs gives the public new means for receiving, and, more importantly, providing information (Rutsaert *et al*., 2013). Some online social networks support both the maintenance of existing social ties and the formation of new connections based on shared interests, political views, or activities, while other networks attract people based on common language or shared racial, sexual, religious, or nationality based identities. Social network sites also vary in the extent to which they incorporate new information and communication tools, such as mobile connectivity, blogging, and photo or video-sharing (Ellison *et al*., 2007; Ellison, 2008). It is worth mentioning that social networks offer their services for free most of the times, relying on advertisement revenues to cover their expenses. This means that marketing aspects are the core factor of success for such type of sites.

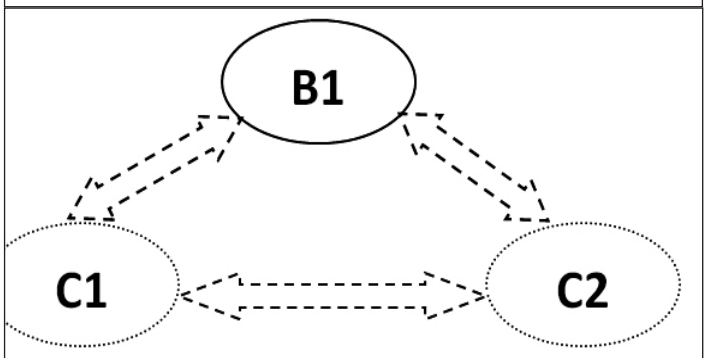
The free service together with the revolutionary increase in the use of social media offer producers the potential to build a new short channel for promoting and selling their products in a rapid, low-cost and direct way. It may also contribute to reducing market margins by enhancing direct sales (Business to Consumer or B2C) as shown in Figure 3. In addition, by operating through social networks, companies can create and manage their own pages to communicate directly with their customers (followers or fans, as they are known in social network jargon) thus saving advertising costs.

Businesses could start their free advertising campaigns by sharing pictures, information and even videos about their products. Additionally, a direct flow of information among consumers (Consumer to Consumer or C2C) is supported. This enables fans to spread the word about the company performance by sharing and commenting with their friends while getting them to leave their experience about the product, its advantages, and disadvantages. The study of Sturiale and Scuderi (2013) provides evidence about the significant impact that purchasing experience has on consumers' intention to spread the word among their peers.

5. Social networks as an opportunity for SME agri-food companies

One of the main uses of social networks as a chain for food marketing would be to facilitate the role of marketing managers to identify their customers' profile, their preferences and

Figure 3 - *Information flows in social marketing models of short supply chains.*



Caption: B1: Business, C1: consumer 1, C2: Consumer 2

the way they perceive certain products. Thus companies may perfectly define their target segments and change their marketing policies when needed.

Producers can also request social networks to show ads to specific people who might be interested in their message, as these applications are designed to help advertisers to find relevant/suitable customers through the use of new technologies like cookies[2]. Cookies offer a useful way for advertisers to understand if the sale of a product on their website is connected to an ad on the social network. Cookies are also used to learn whether someone who saw an ad later visited the advertiser's site.

Moreover, Facebook and other social sites provide reports about the performance of the ads they show, such as how many people viewed or clicked on ads or demographic information about the people who viewed an ad. This information can help advertisers and producers to understand and measure the effectiveness of their ads, which helps them show better and more interesting ads to people.

The dependence of social networks on advertising revenues led them to improve some new marketing tools. For example, Facebook has recently added the "purchase button" to companies' pages with the idea of linking their Facebook pages with their online shops in order to facilitate the online purchasing process through social platforms. In Spain, firms such as El Corte Ingles and Carrefour (food retailers) or Navidul and Oleoestepa (food producers) are some examples of companies that have already taken the initiative to add this purchasing button to their Facebook pages, a move that most SMEs in the agri-food sector have not yet followed. The peculiarities of food marketing could be the reason for this slow movement towards a wider use of social media as a new and strong marketing tool within the Spanish agri-food sector.

There are multiple potential uses of social networks in the agri-food sector. For example, in the case of top-range foods (Delicatessen) or those with Designation of Origin, in which the ability to identify consumers with very specific characteristics is nowadays only available to large enterprises with powerful marketing research departments. With the use of social networks, any food producer can identify and inter-

[2] A cookie is a small piece of data sent from a website and stored in a user's web browser while the user is browsing this website. Every time the user loads the website, the browser sends the cookie back to the server to notify the website about the user's previous activity.

act with clients with high potential interest. Something similar could happen with organic food, where we now find a large number of small producers that on many occasions have to sell their products through conventional chains due to the lack of specific chains. Social networks can supplement this deficiency by providing farmers a direct connection and interaction with their customers.

Obviously, there are products in which the advantages are not so clear, such as those highly perishable, where the problem is more of logistics than of marketing. However, even in these cases, companies can benefit from valuable information coming directly from their present and prospective customers.

In addition, one of the greatest problems any SME may face is the creation of its brand image. Every company needs to communicate constantly with its -present or future- customers either to introduce new products and services or just to provide them with information about their actual products. An adequate solution here is to invest in online brand positioning strategies. Hence, social networks could play an essential role as cheap and simple short chains through which the company can offer a more social image for its customers. Once consumers browsing a brand page perceive emotional and informational supports that satisfy their needs, it would be natural for them to commit to this page. In turn, consumers themselves would participate in the co-creation of a strong brand for the company (Wang and Hajli, 2014).

6. Conclusions

In the present context of globalization and growing competition, small and medium enterprises must look for potential sources of advantage that can help them compensate their flaws. This situation is even more difficult in the agri-food sector, with a fragmented business fabric and great importance of perishable products. Nevertheless, the widespread use of ICT and especially of social networks can open opportunities for these companies, especially to build up short supply chains.

Although consumers may be reluctant to buy food online, some products that do not require cold chain to be delivered or that are not affected by transport delays (preserves, canned food or chocolates) would be the most likely accepted to be bought online. However, it may be considered that it is mostly on perishable products where SMEs agri-food firms can differentiate themselves and add value to their products.

For example, in the case of meat and meat products, internet meat sales have increased in the last years, but there stands the problem of matching the slaughtering of the animals with consumers' demands. The use of social networks, with its almost instantaneous spreading of information, can allow producers to overcome this issue, by creating a short and interactive supply chain, while giving the consumers the opportunity to share their feelings about the product. It might also reduce the impact of health scares that could be addressed with direct producer-consumer communication.

Fruits and vegetables are one of the most important productions of the Spanish agri-food sector. Yet due to their perishable nature they are among the less likely food products to be sold online. In this sense, the experience of online sellers such as Amazon, with consistently short delivery times may pave the way for consumers to accept the possibility of buying fresh products online. Social networks will play an essential role here as the tool that would allow producers to convey real time information to their customers about valued aspects such as harvesting schedules or ripening state.

It can, therefore, be concluded that small and medium agri-food firms have within their reach a powerful tool that can compensate some of the disadvantages derived from their (lack of) size. In this context, the possibility to interact directly with their customers building short food supply chains must be highlighted as one of the most promising lines of growth for this sector. The development of these tools will allow companies to meet market trends and satisfy consumers' demands, who want to know what they eat and where it comes from. Firms will also be able to develop more accurate and cheaper marketing strategies, thus improving their position in the markets and gaining competitiveness, essential aspects to survive and thrive in today's global food markets.

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