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From transactions to cooperation: Developing supply chain of ancient grains between relationships and joint interests

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12 October 2024

From transactions to cooperation: Developing supply chain of ancient grains between relationships and joint interests

Abstract

Purpose: This paper aims to understand whether the supply chain of ancient grains, einkorn in particular, may activate the virtuous mechanisms that enable pursuing a new equilibrium based on relationships and joint interests.
Methodology: This study adopts the single case study as methodological approach. More precisely, it focuses on the supply chain of ancient grains in Piedmont (Italy) of which examines in detail Mulino Marino. Interviews to the management of this single player and to some farmers' local associations were carried out.
Findings: The einkorn supply chain in Piedmont Region is an interesting case of short, local and direct supply chain because it aims at delivering a product that is more sustainable in terms of production, nutritional values and properties. In addition, this study confirms previous studies according which for an effective supply chain management it important to implement the following conditions: a) the right equilibrium among supply chain players' physiologically conflicting interests, b) players' integration, and c) transparent information among all the supply chain stakeholders, including final consumers.
Practical implications: The study offers implications for food managers involved in the (short) supply chain management.
Originality/value: Elements of originality can be identified in this research to the extension of studies on supply chain management in the ancient grains industry.

Keywords supply chain management; ancient grain; cooperation; joint interests; relationships among stakeholders

Introduction

Today, consumers prefer food whereof production sites are close to them, as they do not require long transportation, and it is easier to gather correct information about the production (Matzembacher and Meira, 2019). Consequently, short supply chains are preferred, since they imply stronger interactions between the stakeholders. This is not a matter of transactions between producers and customers, or producers and retailers, rather, it is a matter of engaged stakeholders inclusion in the process of value creation (Greenwood 2007; Greenwood and Van Buren III, 2010; Freeman et al., 2010), thanks to the shift from transactions to relationships. The literature highlights the importance of finding an *equilibrium* (Venkataraman, 2002) between all the stakeholders' interests, which represent conflicts to balanced (Freeman et al., 2010) through network creation (Venkataraman, 2002; Boiral and Heras-Saizarbitoria, 2017; Fassin et al., 2017). Thus, relationships - not transactions

- should develop between and among stakeholders to create an effective cooperation process, in which high degrees of communication and resource sharing exist along the supply chain (SC) (Sautter and Leisen, 1999; Dawkins, 2005; Greenwood, 2007; Fassin et al., 2017; Boiral and Heras-Saizarbitoria, 2017).

This is appropriate with reference to specific food SC such as wheat. Wheat is not just any food. It has a very long history: for about 10,000 years it has nourished most of the world's population (Bindi, 2016; Tellarini, 2017). In its history, it has been synonymous with money, unity of exchange, wealth, subsistence, culture and tradition. It has spread more than other cereals. In 2016, its production reached 740 million tons worldwide, which would be largely sufficient to feed the entire humanity. Throughout history, the crops and agricultural techniques of grain processing have changed, creating a new culture of processing, based on a process of homologation, which has dispossessed the countryside and the farmers of their knowledge and their autonomy. The so-called green revolution started in the second half of the last century, and has allowed the dizzying increase in the agricultural production of cereals, first of all the wheat. According to the Food Outlook report (2018), global wheat production is around 736 million tons with an increase of about 300% compared to the 1960s. The ancient grains, cultivated before the green revolution, did not need fertilisers, pesticides and intense work on the land. The production was certainly lower, but also the production cost was lower (Cooper, 2015), and health benefits were bigger (e.g., Shewry and Hey, 2015; Dinu et al., 2018). The farmer used his knowledge about the most suitable varieties and cultivation techniques. Bringing old varieties of wheat back to the field means to be able to activate new production chains that, for various reasons, allow to respond the today important challenge of activating responsible practices that favour sustainable consumption.

This paper aims to understand whether the SC of ancient grains, einkorn in particular, may activate the virtuous mechanisms that enable pursuing a new equilibrium based on relationships and joint interests. More specifically, this study focuses on the SC of ancient grains in Piedmont (Italy) of which examines in detail Mulino Marino as single case study.

Stakeholders' interactions in SCM: from transaction to cooperation

During the last 30 years, several authors have addressed the concept of SC and its management (SCM). Mentzer et al. (2001) provide an extensive literature review, highlighting that the term has been frequently used to describe executive responsibilities in corporations and that different levels of complexity characterise the SC networks that may be considered, mainly, similar to strategic alliances. The degree of this complexity changes with the numbers of stakeholders involved and the links between the SC and the agents operating in its external environment. However, such a

complexity of supply networks may represent, if not well managed, a threat for stakeholders themselves and does not arise just from the number of interdependencies or the heterogeneity of organizational and information-technological infrastructures (Bullinger et al., 2002). In addition, networks are permanently subject to (external) changes of business environment, e.g. market demand, competitors, etc. (Bullinger et al., 2002).

SCs rely on the interactions between the various players, which the literature has very often considered competing against each other, exploiting the mutual weaknesses and producing high fragmentation (Bezuidenhout et al., 2012).

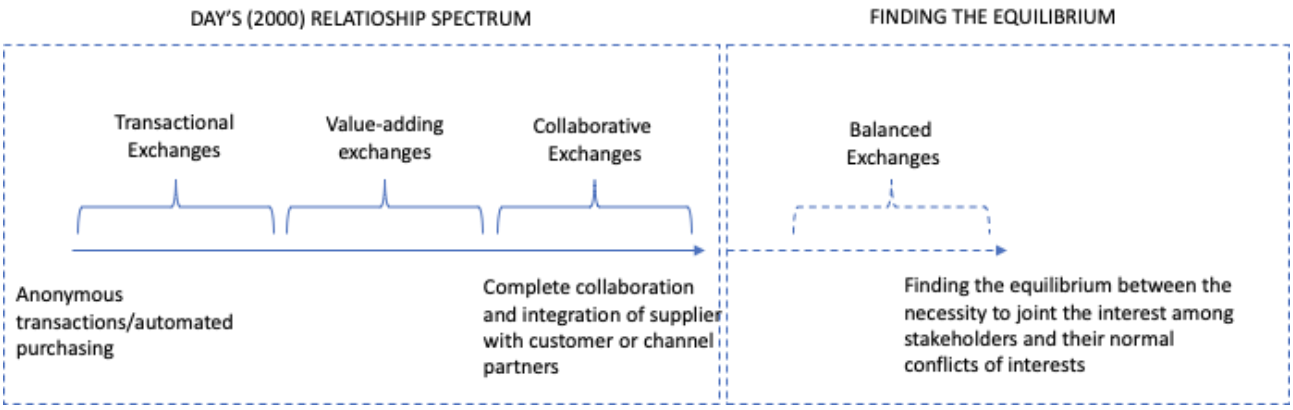
The negative effects of such a destroying competition are now clear, and many authors have highlighted how important the generation of relationships among players can be, especially in long and complex SCs (Candelo et al., 2018; Civera et al., 2019). The literature has also included the upper-end level stakeholders (Freeman and Velamuri, 2006; Fawcett et al., 2008; Fassin et al., 2017; Boiral and Heras-Saizarbitoria, 2017). This new perspective turned the concept of SCM into that of strategic supply chain management (Fawcett et al., 2008), where multi stakeholder initiatives (Mena and Palazzo, 2012) gain strategic importance. This interpretation grounds on the concept of "integration" (Fawcett et al., 2008, p. 36) between all the players, leading to major awareness and, in the end, to many other benefits, as "*mechanism alignment, cross-functional process change, information systems, performance management, strategic alliance design, and people empowerment"* (p. 37).

Integration may bear many advantages that include: increased inventory turnover and decreased order cycle time (Mentzer et al., 2001), increased revenues and costs reductions (Lehtinen, 2012), product availability (Christopher, 2011), responsiveness (Odongo et al., 2016), increased economic value added and capital utilization, decreased time to market, reduced logistic costs (Fawcett et al., 2008; Beduizenhout et al., 2012), and, eventually, a positive impact on social aspects (Pullman et al., 2009; Harrison et al., 2010; Harrison and Wicks, 2013). All these elements are consistent with the sustainable SC model proposed by Carter and Roger (2008). Here the authors highlight the importance of interest integration and stakeholders' engagement, which are also central in Lehtinen (2012)'s though, which considers the concept of relationship as the resultant of the integration of two dimensions of the Elkington (1997) triple bottom line factors (environmental and social). Central in the modern concept of sustainability of supply chains are relationships between the stakeholders (Kottila and Ronni, 2008). The introduction of the ideas of integration and sustainability in models related to the SCM calls for a further step. Indeed, in a world where integration is

fundamental, the relationships between the actors must rest on cooperation rather than on pure competition.

The relationship spectrum proposed by Days (2000) offers a first interesting picture of the sift from pure competition to cooperation. The author starts from "anonymous transactions" (characterised by standard products at competitive price), and ends with showing the presence and the importance of "complete collaboration", so highlighting the relevance of cooperation and integration between all the partners involved in a process. An organization can do a significative quantum lip if it adopts a complete collaborative approach: it is a matter of long-lasting cooperation rather than of transactions and value adding process. In such a way an equilibrium may be reached that is beneficial to all the stakeholders. Furthermore, Freeman et al. (2010) acknowledge that, on one hand, every stakeholder pursues her own interests, which may be at odds with those of the other stakeholders (Venkataraman, 2002); on the other hand, "stakeholder interests are also joint" (p. 23) with those of the society. Indeed, the authors suggest that "the existence of entrepreneurial activity in a society acts as an equilibrating force." (p.20). Other works consider the transition from a transaction economy to one based on relationships (Kottila and Ronni, 2008).

Figure 1 - From transactions to balanced exchanges



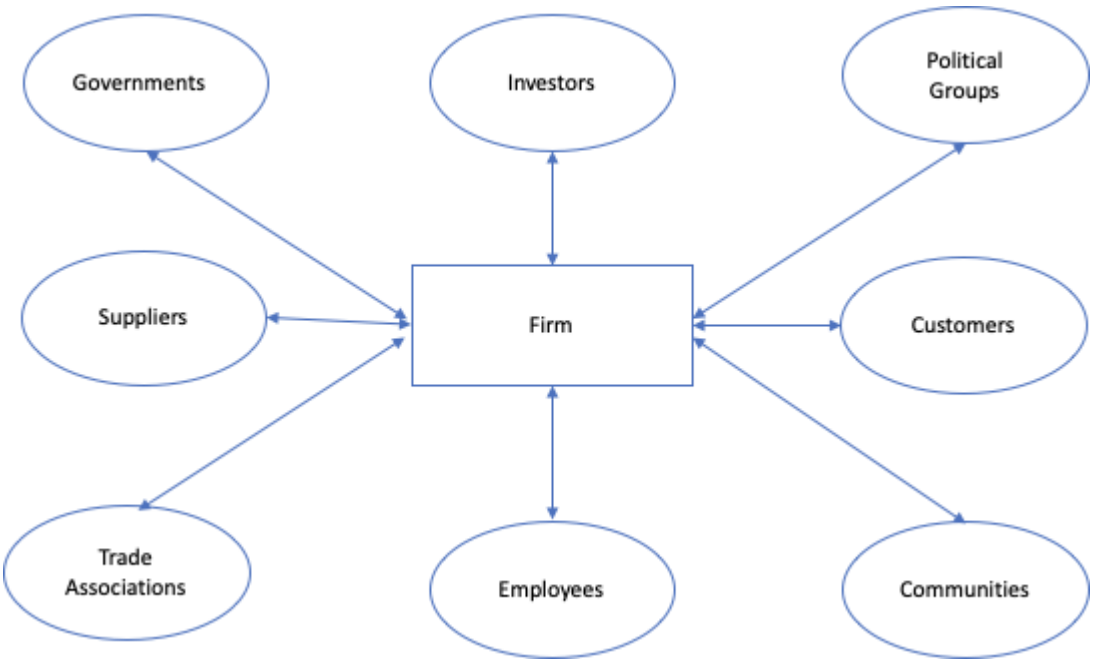
Source: authors' elaboration on Day (2000), Venkataraman (2002), and Freeman et al. (2010)

SCM, sustainable SCM and stakeholder theory

Freeman et al. (2010) highlight the relevance of transaction costs, whose correct management is necessary to protect and sustain the creation of value at firm level (Foss and Foss, 2005), which the strict neoclassical view of "standard account" may instead hinder (see also Venkataraman, 2002).

The Stakeholder model (Freeman, 1984)[1] identifies the real keys of long-run success in the relationships between organizations and their stakeholders, in contrast with the so called "Input-Output Model" (Donaldson and Preston, 1995), considered obsolete by the current literature. According to the Stakeholder model, all the stakeholders of a certain organization are no longer "contributing inputs" (Donaldson and Preston, 1995, p. 68), but they are partners linked to the organization by mutual relationships. Freeman's model is of particular interest to introduce the concept of sustainable supply chain management (SSCM). Indeed, this model is descriptive – inasmuch presents corporations as sums of both competitive and cooperative interests –, instrumental – for it creates a framework for the analysis of connections between stakeholders –, and normative – as asks for mediating between the legitimate interests of the stakeholders.

Figure 2 - The Stakeholder Model



Source: adapted from Freeman (1984) and Donaldson and Preston (1995)

In a SC, no matter its complexity nor its length, exchanges between stakeholders involve common goals (Fawcett et al., 2008). The creation of value comes from cooperation between and inclusion of stakeholders (Sautter and Leisen, 1999; Crane & Livesey, 2003; Greenwood, 2007; Greenwood and Van Buren III., 2010; Dawkins, 2015; Boiral and Heras-Saizarbitoria, 2017), and from the efforts, which turn low-powered actors into players that are both powered and aware (Fassin et al., 2017; Civera et al., 2019). In other words, the model proposes another way to create the

[1] See Fassin (2009) for the further developments of Freeman (1984).

equilibrium, including not only the benefits of each single player, but also – and mostly – all the mutual benefits (Venkataraman, 2002).

Recent interpretations of the theory of competitive advantage (Porter, 1980) claim that it may be "sustainable" within SCs (Kottila and Ronni, 2008, Bezuidenhout et al., 2012; Ritthaisong, 2014). In the light of Elkington's (2013) triple bottom line, profits are sustainable in the long run when they are respectful of social and environmental aspects. While Porter's model is outdated and some consider it no longer valid, the competitive advantage may nevertheless be interpreted in terms of sustainability (Fawcett et al., 2008). In such a framework, the protection of a competitive advantage over the long run rests on intangible bases: Ritthaisong et al. (2014) mention reputation, human resources management, networks and vertical integration in particular; Bridoux and Stoelhorst (2016) go further and present the idea of "joint value creation"

In light of what said, the analysis of a food short SC could be remarkable and in the following section is presented an example of short and simple SC in the food industry, framing it within the stakeholder theory.

Ancient wheat supply chain and the stakeholder theory

The bases of what has been developed as stakeholder theory fits with the definition of "strategic supply chain" (Fawcett et al., 2008). Moreover, all these elements have a direct validation in short and simple (or direct) SCs, which are gaining momentum, especially in these last years (Arfini and Mancini, 2018). These are characterised by high degree of communication between players (Kottila and Ronni, 2008) and by high degree of resource sharing (skills, knowledge, networks, etc.) between partners, which, according to Fawcett et. al. (2008) represent the most important base for the success.

Indeed, a shorter SC can better represent a good example of what said above, as it develops on a specific and limited territory, in spite of its complexity; furthermore, its stakeholders have very good chances to interact with and influence each others (Matzembacher and Meira, 2019). Value creation is a central factor of any (short) SC: every effort aims at having direct repercussions on a specific area (Lehtinen, 2012) and stakeholders are more prone to generate value, as this value has strong impact on their own society. To sum up, a short SC has, by definition, more chances than a long to be integrated (Matzembacher and Meira, 2019) and, for this reason, its analysis is, according

to Fawcett et al., (2008), of particular relevance to depict whether and how the focus is on relationships rather than on transactions, with the aim of achieving joint interests.

Local agricultures are usually addressed to local consumptions, which means that distances between the producer and the consumer are typically short (Norberg-Hodge, 2002). Consequently, it is easier for these SCs to be more sustainable that others (Lehtinen, 2012), since there is major attention on biodiversity, energy consumptions, local and social concerns and value creation (Ilbery and Maye, 2005) and mutual benefits (Odongo et al., 2016; Wynstra, Spring, & Schoenherr, 2015).

Ancient grains (einkorn, emmer, spelt and Khorasan wheat) are considered particularly beneficial under many perspectives (Shewry and Hey, 2015; Stefani et al., 2017; Longin and Wurschum, 2016); their benefits are compared to modern wheat cultivations, which are industrialised, over-processed and apparently bad for the human health (Longin and Wurschum, 2016). The – so far limited – literature about this topic allows to describe an "ancient wheat" as a particular cereal, which cannot help feeding the growing world population, as it is low yielding and not suitable for the application of modern agricultural practices (Longin and Wurschum, 2016). Nevertheless, the analysis of a classical wheat production chain is useful to analyse and determine interests of various stakeholders, and to underline how important and strategic the relationships between players (or partners) are. Indeed, although short and simple, this SC involves a set of coordinated actions and efforts carried on by farmers, millers and wheat processors (pasta makers, bakers, chefs), to which we have to add the "consumers' willingness to recognise the non-conventional quality of ancient wheat" (Stefani et al., 2017). In this SC, the central role is played by the mill, which is responsible for raw material quality (Ritthaisong et al., 2014), knowledge sharing (Fawcett et al., 2008) and all those relationships that allow all the players to adopt a win-win strategy (Longin and Wurschum, 2016).

We contextualise our research within the concept of joint interests which found its major meaning inside the Freeman's stakeholder theory (Freeman 1984, Freeman et al, 2010 Strand and Freeman, 2015). The example of einkorn, as a kind of ancient wheat, is useful, as it presents a short and direct SC; it is a kind of crop, which needs sustainable practices and, by definition, strong relationships, mixed to regional values (Conto et al., 2014). The main aim of this paper is to understand whether and how, in such a SC, strong relationships and joint interests represent levers to reach common goals, better product knowledge and more effective customer education, which can lead, eventually, to larger product consumptions.

Methodology

To understand whether the SC of ancient grains – einkorn in particular – may activate the virtuous mechanisms that enable pursuing a new equilibrium based on relationships and joint interests, this paper analyses the only one case of Mulino Marino, considering the Eisenhardt and Graebner (2002) theory, according which a deep analysis of only one case can be relevant and representative. Mulino Marino, indeed, is the only mill processing ancient grains in Piedmont, an Italian region, with strong agricultural tradition and vocation. According to the regional farmers' association (Coldiretti), Piedmont grew wheat on 84,000 hectares in 2018, of which about 5,000 were devoted to ancient grains. In such a context, the SC of ancient grains represents a relevant and interesting case to study. Moreover, the presence of only one mill renders the analysis of the case particularly robust, as potential confounding factors deriving from fragmentation are reduced. Of course, the presence of a monopsony-monopoly may have some negative aspects for the SC; this section will also address this issue.

The stakeholders involved in the examined SC are: the farms that produce ancient grains, the mill, the subjects that process the flours produced by the mill, the local food association, the retailer and finally the consumers of both the flours and the processed aliments. This SC has two advantages with respect to others present in the food industry: it is short and geographically circumscribed. One may argue that the SC under analysis is very peculiar; on the one hand, this is true in the very wide panorama of the global food industry, and therefore it should be clearly stated that it is not representative of the generic SC in this industry. On the other hand, traditional crops are growing in the attempt of preserving biodiversity, providing healthier and more and more diversified food, preserving traditions, cultural values and territories. Consequently, the SC considered here is representative of this niche of the food industry; as this niche is growing fast, studying it and the related mechanisms may be of great interest both at academic and managerial level.

The analysis exploits the presence of the monopsonist-monopolist mill to gather information on the most of the SC. Indeed, thanks to its special position, Mulino Marino accesses the most of the relevant information about the SC. Given the centrality of this single player, the management of the mill was interviewed to understand the dimension of the SC, and the relationships between the firms that are part of the chain and the territory, whose involvement is – at least in part – indirect. Furthermore, to analyse even an independent and impartial point of view, managerials interviews were addressed to some farmers' local associations (Coldiretti and 7 Spighe). The interview aimed at gathering not only economic data, but especially a set of information regarding environmental and

social sustainability of the chain, so to make the main joint interests emerge and to understand the links between the players. Such a method allows for capturing the existence of (at least the most relevant) joint interests, how they are pursued and their contribution to local development both in economic and social terms. The microeconomic theory suggests however that the presence of a monopsony-monopoly has distortive effects on the market; in particular, such a player will tend to extract surplus from the others parts of the SC. Therefore, any positive outcome for players other than Mulino Marino represents a lower bound, rendering any positive outcome particularly strong in terms of significance for future developments and policy suggestions.

Findings

The results are interpreted in the frame of Donaldson and Preston's (1995) typology of stakeholder Theory that includes the following three aspects: 1) descriptive accuracy, 2) instrumental power, and 3) normative validity.

Descriptive aspects

This aspect describes, and sometimes explains, specific corporate characteristics and behaviours, and illustrates the intrinsic strategic environment of the organization as portrayed through its social, political, and ethical dimensions. Specifically, Mulino Marino was born in the heart of the Langhe in 1956 in Cossano Belbo (a rural municipality of Piedmont), where Felice Marino bought the municipal mill and began producing flour. The firm was one of the precursors of organic farming, in a historic moment, in which refined flours were being sold more and more on the market. Since 2007, Mulino Marino produces only certified organic flours, which are ground through natural stones, and pays great attention to the choice of raw materials. In Fulvio Marino's words:

After seeing that there were many herbicides in the soil, after a family council, we decided to have the wheat analysed. It wasn't wheat, it was poison. So, we started doing it organic. The farmers were initially wary, but then they became convinced and today we work well together, exporting flour all over the world.

More precisely, Mulino Marino adopted crop rotation and biodiversity conservation, and rejected agrochemicals, and intensive monocultures. In addition, it uses real quarry stones, keeps the live germ of the grain in the flour, and has built ten natural stone mills for different styles of grinding. It rejects massive productions, high temperatures, and refined and white flour.

The grain becomes flour through a process based on true wholemeal flours, true because they are ground in the mills of the late 1800s. The grinding process is very slow, does not overheat the final

product, and keeps all the natural parts of the grain, the water-soluble vitamins, the trace elements, the fibers and all that nature has given to the raw material.

The mill works within a SC, which includes several farmers, and satisfies a large number of stakeholders from suppliers to customers, from trade associations to local communities, as well as to Eataly shops that sell products derived from Mulino Marino's flours. In this sense, this mill is expression of strong ethical values:

We all have a duty: to protect the environment and future generations. For this, we are proud to be Artisans. For this reason, we make organic flours and grind them with natural stone.

Instrumental aspects

The instrumental aspect of stakeholder theory draws connections between organizational practices and goals based on product quality, technological leadership, and reputation. With specific reference to product quality, Mulino Marino grinds with natural stone from seven generations, slowly and "ruining" each single grain as little as possible. The process is particularly natural because the large millstones used come from a quarry in French Pyrénées and not from an in-line production. The stones of the mill are constantly subjected to the ancient art of "re-glazing" ("hammering"), i.e. manual operation to obtain the best flour at sensorial and technical level thanks to the reconstruction of the surface by hand-hammering. This activity varies with the type of flour that the mill wants to obtain and may ultimately be considered "crafty". In this way, Fausto explains their attention to product quality:

Natural stone grinding allows to obtain the flour in a single step, thus avoiding as much as possible all the stress on the grain and the flour. Through the art of hammering taught by our grandfather Felice, it is possible to obtain different types of flour depending on the cereal, without standardising the grinding; for this reason, we have ten mills with natural stone, one different from the other.

Quality product is obtained transforming the grains in the best possible way without the use of any improver or preservative, giving extreme importance to the origin of cereals, their organoleptic qualities, and the food safety.

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We take into consideration the flours from the point of view of their chemical and energetic characteristics, providing a detailed list of the values of trace elements, vitamins, amino acids, sugars, fatty acids and the other components. In this regard, we have a in-house laboratory that we use to work our flours and, above all, to measure their quality, identifying important trace elements for tastes and aromas.

The policies of Mulino Marino provide farmers not only with the possibility of selling the entire production of their ancient grains, but also with economic sustainability all through the year. This happens with crop rotation by alternating wheat and einkorn, peas, potatoes, etc. In this way, while resources are taken from the soil, this last also benefits from such practices. For example, making the rotation with potatoes was possible first with buckwheat and then with einkorn. More precisely:

Einkorn is the oldest cereal that has been domesticated by man. The botanical species is the "tritticum monococcum". We collected several families of this cereal and brought them together in a single population of different seeds. We went to sow in Alta Langa. The characteristics of this cereal are incredible because it is poor in gluten, it is very rich in carotenoids, which are precursors of vitamin A, natural antioxidants, and it is yellow, so it gives all the preparations where it is used a very beautiful yellow color, and it has a different flavour and aroma from those of traditional flours. It is a product that dates back a long time ago and, despite this, even today is a product appreciated by many people who are looking for a quality and safe product. It is a cereal that, due to the production logic, had been abandoned. Although it grows spontaneously throughout the Mediterranean basin, the interest in this cereal is low because it makes one third of the soft wheat and because it is born dressed, therefore it is born with a skin and must be peeled with a further loss in quantitative terms.

In keeping with tradition, Mulino Marino is keeping up with the times. More precisely, it relies to cylinder milling:

Our cylinder mill comes from the latest Buhler technology; the Antares Plus model gives the miller the opportunity to control the grinding temperature (to get as close as possible to those in natural stone grinding) and to control the degree of granulometry at each single step. With this technology, in 2016 we have doubled the grinding surface maintaining the hourly production unchanged, with higher quality in terms of starch damage, grinding at lower temperatures and with much more calibrated flours.

The reputation of the mill is high, as outline their stakeholders who can verify the origin and composition of flour at any time, either in the mill or through the institutional website to obtain complete transparency and food safety.

For example, a customer can check the flour according to the lot printed on the label and can download the test reports on the nutritional values and food safety of our flours. The test reports

document our research on raw materials and that practices were used to eliminate more than 600 pesticides (herbicides, insecticides, fungicides), and chemical growth regulators (e.g., chlormequat, mepiquat), which are normally sprayed on soil and plants and remain in flours.

Normative aspects

The normative dimension of stakeholder theory states that all the stakeholders (e.g. farmers, customers, laboratories, communities, associations) deserve consideration and long-run commitment. According to the founding father of Mulino Marino, the *ground must be respected for us and for the future generations*. For this reason, its employees consider organic agriculture a starting point for the best possible quality of their flours, because it rewards the biodiversity and the rural wisdom of Italy. This reasoning started with these words:

After analysing the ground, we saw that it was not wheat but poison. We started making organic. My grandfather told me the following very important sentence: "The ground is tired". The ground is stressed by the continuous use of pesticides, herbicides and fungicides that have been given to the soil for too many years, and have impoverished it, have made it almost inert. An important thing for producers is responsibility; they must feel the responsibility on their shoulders to create a product that goes into the "belly" of the final consumers, because they are feeding them. This is an important thing that food producers have to think about. It is an indispensable value.

Mulino Marino has close bonds and very close exchange of opinions with the supplier farms, to sow the best grains for giving their customers the best flour.

"We have frequent and strong relationships with our 20 suppliers (farmers) and our einkorn processors, who are: 2 pizza restaurants, 8 bakeries, 2 gourmet restaurants and Eataly, our retailer"[...] *"We cannot think about our supply chain without a daily effort in enhancing our stakeholders' trust and confidence".* Trust is crucial in this SC. For example, the einkorn production has created a close network:

For farmers, sowing einkorn is advantageous because they enter the field at the time of sowing and return at the time of harvest, so they have less expenses. They sow in the fall and re-intervene on the crop in spring to control the weeds through a mechanical passage. They can grow healthy and less expensively. Since they don't apply treatments, there are lower costs than for other companies. Einkorn has a low yield in quantitative terms but the quality of the product allows farmers to sell it at a higher price than industrial grains. The conventional method did not allow to obtain an adequate

economic support. The conventional method for cereals production did not allow to obtain an adequate economic support. Accordingly, many agricultural enterprises would have closed.

Another important relationship is that with external laboratories:

We rely on external laboratories accredited worldwide for quality control. We make analyses to check for the absence of pesticides, herbicides and fungicides as a guarantee of quality to produce unrefined but integral flours.

All this creates trust among customers who can buy a healthy product:

The guarantee of the certification is important because checks are real. The certification gives the consumer the guarantee that the supply chain was checked.

As above mentioned, even Coldiretti association plays an important role in this trust building:
We aim at spreading the knowledge about ancient grains and einkorn in particular. This creates interest in final consumers.

In addition to long established relationships with Farinetti family, which distributes products at Eataly stores, the relationship with some trade association is very important:

Through the cooperative "Cooperativa 7 Vie del Belbo" and Coldiretti - the major Italian farmers' trade union - association we have finalised some specific contracts, which allow us to supply very high-quality cereals. These cereals allow the revaluation of the territories because the cereal provides the various farmers, who would have difficulty in sowing traditional cereals, with economic aid.

Implications and discussions

The analysis of the Mulino Marino case helps depicting both theoretical and managerial implications, as follows.

Theoretical implications

The literature over the SCM and, more precisely the SSCM, considers the importance of relationships, joint interests, stakeholders' inclusion, exchanges between stakeholders and common goals (Fawcett et al., 2008). As already mentioned, all these elements are close to the basis of the so-

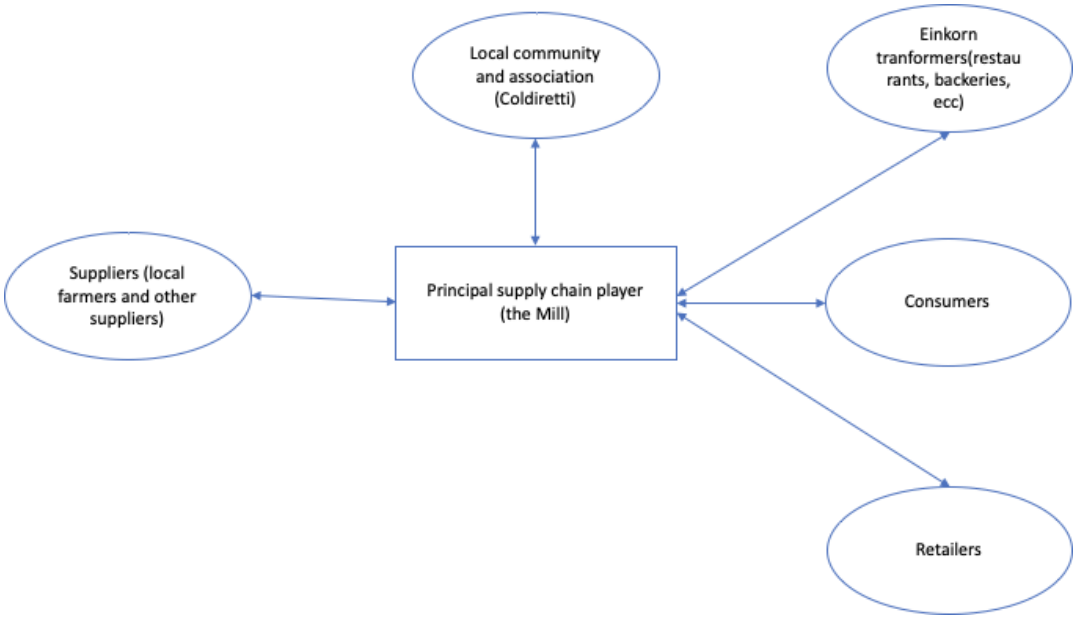
called stakeholder theory, based on a model, which shows all the links and the relationships between stakeholders. On the one hand, these last have personal needs and goals; however, on the other hand, they are linked to each other by common goals and joint interests (Freeman et al., 2010). The presence of joint interests is in fact validated for the case presented. As the findings show, all the players have their specific interests, because of their position in the SC. Nevertheless, all of them aim at the major degree of quality as possible, and, according to the managerial interviews we could run, this degree is reachable only through the cooperation of all the players. Furthermore, cooperation takes to raw material knowledge dissemination along the SC, to fully involve customers in the chain processes referring in particular to the "customers' will to buy" (Stefani et al., 2017).

If we want to model this specific SC under the lens of stakeholder theory, we must focus the attention on fewer stakeholders than the 1984 model considers. Figure 3 shows how the model may be adapted here. The central role is played by the mill, in our specific case, which is the catalyst of every relationship and communication of this SC, also confirming what argued by Fawcett et al., (2008): communication, if not transparent and well managed, may represent a barrier for the SC to be effective. Through the mill, every stakeholder has a second degree relationship with the others.

In keeping with this, another player is here fundamental: the local committee of the farmers' association Coldiretti, which aims at spreading the knowledge over the local products and their characteristics. In this SC, retailers and final consumers are also involved: who buys einkorn and its derived products is usually aware of what he/she is buying and wants to be informed about raw materials and production processes.

In this particular case, "employees" are all from the owner family; therefore, their introduction in the analysis is not particularly relevant nor useful for the analysis proposed in this paper. This characteristic is not peculiar to Mulino Marino, as local farms, including producers of einkorn - being small enterprises - mostly employ only family members. Therefore, while family members should not be considered as employees, nevertheless they are important stakeholders as members of the ownership group and involved in strategic decisions (Sautter and Lesen, 1999; Crane & Livesey, 2003; Greenwood, 2007; Greenwood and Van Buren III., 2010; Dawkins, 2015; Bridoux and Stoelhorst, 2017; Boiral and Heras-Saizarbitoria, 2017 Boiral et al., 2017). Moreover, families are much involved in their territory, feel a strong link between themselves, local people and the territory. This link confirms the implications of Fawcett et al. (2008), which considers people as the key resource in a collaborative and strategic SC.

Figure 3 - The stakeholder model with a principal short SC



Managerial implication

From a managerial perspective, all the entrepreneurs and association representatives have recognised the importance of relationships and continuous communication. They do recognise that the current success of einkorn is due to mutual learning about this crop and its properties; all the interviewed people agree that ancient grains must be grown and processed as they were in the past and no one thinks that a major degree of innovation is needed. Such a position in part rejects the importance of innovation, explicitly accounted for in Fawcett et al. (2008), but relies on the findings of Lehtinen (2012) and Longin and Wurschum (2016), which basically demonstrate the solid link between entrepreneurs on the one side, and their soil, their land and local people on the other. This drives to another managerial implication which sees people acting for protecting their environment especially when they know it and they live there.

The interviews suggest another implication, which, following Venkataraman (2002), suggests that both inside and outside a corporation (in our case: a SC), different stakeholders normally have also competitive claims to increase their payoffs. This does not mean accepting outdated models such as Porter's (1985); rather this means to recognise that every entrepreneur knows his/her interests and those of the others, some of which are in competition to each other. However, shared knowledge helps all the players in this short and simple SC recognising how to discover, smooth, and resolve them, since *"conflicting claims have to be discovered and methods for resolution executed"*

(Venkataraman, 2002). Thus, according to interviewed entrepreneurs, finding an equilibrium among all the players is the only way to enhance the quality and the quantity of a product, which has been raising on the market.

Findings show also that farmers are both critical and vulnerable stakeholders, according the definitions above mentioned in the literature review (Dawkins, 2015; Greenwood and Van Buren III, 2010; Civera et al., 2019) and this is why the considered mill, i.e. the most powerful player in this short SC, has daily relationships with them since always. Moreover, Mulino Marino has always been spending effort in building stakeholders' trust (Greenwood and Van Buren III, 2010) and engagement (Greenwood, 2007) from the beginning, by leveraging on its reputation and shared values (Ritthaisong et al., 2014). Of course, reputation starts a virtuous cycle: on the one hand, the reputation of the mill increases when attracting the best suppliers; on the other hand, a more reputed brand allows the mill to broaden its business, accruing more resources to invest in quality improvements.

Eventually, should the interest in einkorn coming from bakers, restaurants and pasta makers increase, it might lever on the final consumer curiosity and, in the end, lead to a beneficial increase in product awareness. This implication confirms - also for ancient grains - some of the findings reached in literature about other food markets and chains, in which the quality of the raw materials depends on the interaction between farmers, processors and consumers. To conclude, the mill is fundamental and central for the all SC, it represents a quality assurance for clients and final consumers, as well as for upper end level stakeholders.

Conclusions, limitations and further steps

Despite being referred to a peculiar market defined in just one territory, the einkorn SC in Piedmont Region is an interesting case for analysing whether and how the stakeholder theory - and of course its model under the Donaldson and Preston's (1995) perspective - can be applied in a short, local and direct SC, which aims at delivering a product that is more sustainable because of its production, nutritional values and properties. This analysis takes to a straightforward result: to be effective, SC players have to find the right equilibrium among their physiologically conflicting interests (Venkataraman, 2002; Freeman et al., 2010; Boiral and Heras-Saizarbitoria, 2017; Fassin et al., 2017). Furthemore, it represents an attempt of defining bridges to an effective management, confirming, basically, some of Fawcett et al. (2008) findings in terms of bridges for an effective SC management, as the importance of players' integration and the transparent information among all the SC stakeholders, including final consumers.

The present study has some limitations. First the limited area considered may not be representative of other geographical markets, although in the first ten months of 2018[2] its wheat production represented 12.11% of the Italian production. A second limitation arises from Mulino Marino being the only mill in the region that processes ancient grains, rendering the case analysed peculiar and non-representative of other markets with higher degrees of competition. Nevertheless, as already stated, the peculiar structure of the Piedmontese market allows for considering it a lower bound for more competitive situations. A third limitation - perhaps the most important - arises from the novelty of the industry of ancient grains. As for all the new phenomena, data are scarce, changes happen fast and future developments of the market are highly uncertain even in the short run. While such a dynamism is a positive feature for a recently born industry, it renders research on the topic particularly hard and conclusions difficult to draw.

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[2] Source: ISTAT: http://agri.istat.it/jsp/dawinci.jsp?q=plC010000010000012000&an=2018&ig=1&ct=243&id=15A|18A|25A lastly accessed on May 25, 2019

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