



LV CONVEGNO DI STUDI

METAMORFOSI VERDE
AGRICOLTURA, CIBO, ECOLOGIA

Complesso monumentale di San Pietro
Dipartimento di Scienze agrarie, alimentari e ambientali
PERUGIA 13-15 settembre 2018

**INNOVATION AND SHARED VALUE IN THE AGRI-FOOD
INDUSTRY: THE CASE OF "AUREO" WHEAT SUPPLY
CHAIN**

*Stanco Marcello**, *Nazzaro Concetta*, *Marotta Giuseppe*, Department of Law, Economics, Management and Quantitative Methods, University of Sannio, Italy

*Corresponding Author. E-mail address: mstanco@unisannio.it

Abstract

1 - Introduction The importance of innovation has emerged since the early decades of the last century, when Schumpeter (1934) defined it as the main driver of economic development, referring, with this term, to "doing new things or doing things that they have already been done in a new way" (Schumpeter 1947, p. 151).

Starting from the first theories of Schumpeter, innovation has become the object of numerous studies, especially in the managerial field, aimed to defining, in particular, what are the determinants that favor its diffusion. In fact, innovation is a process that "differs across sectors in terms of characteristics, sources, actors involved, the boundaries of the process, and the organization of innovative activities" (Malerba, 2005, p.380). There are many factors that influence these differences, on which the literature has focused, among which: the market structure and the firm's size (Schumpeter, 1950), the market power (Inderst and Wey, 2006), the ability to capture the value created (Arrow, 1958), the regimes of "appropriability" (Pavitt, 1984; Teece 1986, 2006; Levin et al. 1987; Gulati and Singh, 1998) and the degree of vertical integration of the enterprise (Frankel, 1955, Kindleberger, 1964, Karantininis et al., 2010).

The emergence of increasingly uncertain and turbulent competitive markets has led companies to accelerate their innovative processes in order to differentiate their offer and create a competitive advantage. This phenomenon has interested also the agri-food sector in which the changing needs of the citizen-consumer, linked not only to the material aspects of the product (taste, healthiness, appearance), but also to the intangible aspects (sustainability and social aspects), pushed the companies to improve the quality of their products by increasing the rate of sustainable innovations (Marotta and Nazzaro, 2012). However, innovations aimed at improving the quality of products, through reformulation of the same

(Simeone and Marotta, 2012), in most cases can not be carried only in the agrifood company, but they require a series of actions that concern all the economic operators involved in the production process, along the entire supply chain, starting from the farms.

Therefore, innovation becomes a collective process that requires the commitment of all the parties involved in the supply chain, from the producer to the agrifood company. It is therefore necessary that all the actors in the supply chain act in the same direction, sharing the innovative strategy proposed by the agro-food company. The Transaction Cost theory of Williamson (1985) has contributed significantly to the study of inter-organizational exchanges by defining, based on the nature and the specificity of the risk, the activities to be internalized and those to be carried out on the market.

Starting from these considerations, the aim of this study is to analyze which are the governance mechanisms that, in order to implement a competitive strategy based on the introduction of sustainable supply chain innovations, guarantee a fair distribution of the value created, avoiding opportunistic behavior by the actors involved in the innovation process.

2. Methods and Data - The methodology adopts a qualitative approach analyzing the case study of the "aureo" wheat supply chain. The leading company, Barilla pasta factory with the brand "Voiello", to launch a reformulated product, with high protein characteristics, obtained with Italian wheat, asked the actors involved in the various phases of the supply chain to experiment a series of sustainable innovations useful to improve the quality of the grain. In order to prevent the various parties involved from adopting opportunistic behaviors, bilateral contracts were signed between the agrifood company and the storage firms, and between the latter and the cereal farms.

As part of the study, the governance mechanisms used were analyzed, in order to assess whether they guaranteed an adequate and fair distribution of the value created between the various actors in the supply chain in relation to the commitments made. Therefore, several unstructured interviews were conducted with farmers and with the company management of storage firms. Finally, for this purpose, the crop accounts of the cereal companies and the balance sheets of the storage companies and "Voiello" were analyzed.

3. Results - The results show that a supply chain innovation strategy, managed through appropriate governance mechanisms that discourage opportunistic behavior, creates shared value. In the case of the "aureo" wheat supply chain, the collective innovation strategy has allowed Barilla to relaunch the "Voiello" brand by launching a reformulated product with high protein characteristics: the "Voiello" pasta produced with 100% "aureo" wheat. The innovation, besides having positively influenced the company's turnover, has produced a series of positive impacts for actors in the supply chain and for

the environment. In particular, it contributed to stabilizing the income of cereal farms, through the payment of a guaranteed fixed price, and to a sustainable management of natural resources. The case analyzed represents a best practice for companies wishing to implement supply chain innovation strategies.

Keywords : Sustainable innovations; wheat chain; governance mechanisms; shared value

References

- Arrow, K., 1958. On the stability of the competitive equilibrium. *Econometrica* 26 (4), 522–552. Frankel, M., 1955. Obsolescence and technological change in a maturing economy. *American Economic Review* 45 (3), 296–319.
- Gulati, R., Singh, H., 1998. The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly* 43, 781–814. Inderst, R., Wey, C., 2006. Buyer power and supplier incentives. *European Economic Review* 51, 647–667.
- Kindleberger, C.P., 1964. *Economic Growth in France and Britain, 1851–1950*. Harvard University Press, USA.
- Kostas Karantininis a, Johannes Sauer b,* , William Hartley Furtan, 2010. Innovation and integration in the agri-food industry. *Food Policy* 35, 112–120.
- Levin, R.C., Klevorick, A., Nelson, R.R., Winter, S.G., 1987. Appropriating the returns from industrial research and development. *Brookings Papers on Economic Activity* 3, 783–820.
- Malerba, F., 2005. Sectoral Systems: How and why innovation differs across sectors, in J. Fagerberg, D. Mowrey and R. Nelson (Eds.) *The Oxford Handbook of Innovation*, 380-406, Oxford: Oxford University Press.
- Pavitt, K., 1984. Sectoral patterns of technical change: towards a taxonomy and a theory. *Research policy*, 13(6), 343-373.
- Schumpeter J.A., 1934. *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle* (Vol. 55). Transaction publishers.
- Schumpeter, J., 1950. *Capitalism, Socialism, and Democracy*. Harper & Row, New York, NY.
- Schumpeter, J.A., 1947. The creative response in economic history. *J. Econ. Hist.* 7 (2), 149–159.
- Simeone M., Marotta G., 2012. The price discount effects in the Italian pasta market. *Journal of Food, Agriculture & Environment*, Vol.10 (1): 162-166.
- Teece, D.J., 1986. Profiting from technological innovation. *Research Policy* 15, 285–305.
- Teece, D.J., 2006. Reflections on profiting from innovation. *Research Policy* 35, 1131–1146.