

The role of technology in market access and transparency enhancement *The example of the Italian Online Commodities Exchange*

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The development and application of Information and Communication Technology (ICT) solutions to the agricultural sector have been among the leading fields of research and discussion over the last years, drawing the interest and energies of organizations, institutions and decision makers.

Besides the improvement of the quantity and quality of productions, another key challenge of the world agenda is the enhancement of the access to and transparency of agrifood markets. ICT has the potential to make a difference on these aspects too. A widespread access to markets, quicker mechanisms to trade, availability of reliable data on prices and market trends are central factors to reduce the imbalances in the downstream sections of the supply chain, especially those connected with the wholesale commercialization. Additionally, the improvement of market access and transparency has also a beneficial effect on the upstream stages of the supply chain, allowing methodical planning in agriculture, one of the human activities more prone to uncertainty and volatility. Although with some differences, this is true for both developed and developing countries. The Agricultural Market Information System (AMIS), established at the request of the G20 in 2011, is a praiseworthy initiative going in this direction.

Therefore, the application of ICT to the agricultural sector contributes to improving market access and transparency. This can happen through new tools for transactions and new mechanisms for the collection and dissemination of reliable data on prices and market trends. On one hand, the exponential development of information technology has made the traditional organization of markets obsolete, while on the other it offers new solutions to old problems.

Moreover, in the era of open data and notwithstanding the efforts made, much information on price discovery is still not completely clear and unavailable.

Commodity exchanges are the perfect laboratory for such an experiment, since they traditionally offer a marketplace for trade, collect and disseminate prices, and assess the quality of products. The adaptation of the traditional concept of commodity exchanges to the ICT driven economy is what Italian institutions have invested in, with the primary aim of improving market access and transparency, primarily for the benefit of companies in the agricultural and agrifood sector, small and medium-sized ones.

From the traditional commodity exchanges to the BMTI

The Italian Online Commodities Exchange (Borsa Merci Telematica Italiana-BMTI) is the regulated online market of agricultural, agrifood, agro-energetic and fish products, working through a platform accessible from devices connected to Internet. The BMTI was conceived as the technological evolution of the traditional commodity exchanges, upon the initiative of the Chambers of Commerce system¹. It was established by a legislative measure of the Ministry of Agricultural, Food and Forestry Policies in 2006², after a trial period during which different organizational models were experimented, before reaching its final structure.

¹ The Italian Chambers of Commerce are gathered under the aegis of the Unioncamere federation

² Ministerial Decree n.174 of April 6th 2006, as subsequently amended and supplemented

Italy has a longstanding tradition of commodity exchanges, with peculiar characteristics shaped over the centuries around the productive system of the country. The modern structure of commodity exchanges dates back to 1913, when the first organic law on this subject was issued³. Traditional commodity exchanges were characterized by the physical presence of the operators, the physical presence of the product to be traded in the form of samples, the absence of warehouses, the absence of trade of futures contracts, the presence of an arbitration chamber, an organization on a provincial territorial basis, and specialization in a particular commodity or commodity group.

Contrary to what happened in other countries, in Italy the transformation of the physical commodity exchanges into financial markets did not take place. Thus, the Italian commodity exchanges preferred to specialize in offering other services such as logistic support, standardization of contracts, the possibility of resorting to arbitration, and the publication of price lists.

Many commodity exchanges closed down during the last decades, because of the declining participation of the economic operators and the development of alternative channels of commercialization. Despite that, some physical commodity exchanges are still active in Italy, thanks to their sectoralisation, for example the Commodity Exchange of Bologna is specialized in cereals.

One of the reasons why the Italian Online Commodities Exchange was established, was undoubtedly to adapt the system of commodity exchanges to the changing times, but this was not the only one. Firstly, the necessity to provide the operators with an additional and innovative tool to trade, within the framework of a set of regulations and procedures, especially to support the parties with a weaker bargaining power. Secondly, the need to unify and make more reliable the mechanism of collection of wholesale prices of agricultural and agrifood products, a task assigned by the Italian law to the Chambers of Commerce on a provincial level.

³ Law n. 272 of March 10th 1913

Supporting market access

The idea at the basis of the development of the Italian Online Commodities Exchange-BMTI is therefore extremely simple: to extend the potentiality of Internet, and more in general of the ICT, to the traditional concept of commodity exchanges. The accreditation of the operators wanting to access the exchange takes place online. They fill in an online form with their data and the request is automatically transmitted to the exchange's offices. The BMTI staff check if the operators fulfill some minimum reliability requirements.

The platform is accessible online, through any electronic devices connected to Internet, smart phones and tablets included. The negotiations are carried out online thanks to a continuous auction mechanism one-to-many, which reflects the market dynamics. Recently, the possibility of a direct conclusion of the contract, skipping the auction phase, has been introduced. The exchange operators can detail the main characteristics of their products by filling in specific fields, which will be an integral part of the sale contract. It is also possible to upload documents certifying the quality of the product to be traded. This has made the commercialization on the BMTI also of quality products, besides the commodities, possible. Not surprisingly, among the most traded categories we can find designations of origin like the Parmigiano Reggiano and Grana Padano.

The access to and the way of carrying out the negotiation on the exchange are defined by a regulation, available on the website and accepted by the operators beforehand. If the negotiation is successful, the platform issues an online contract which is valid pursuant to Italian law, also considering the recent introduction of the obligation of written contracts in the agrifood sector⁴.

⁴ The infamous "Article 62" is a commonly used term in the Italian panorama to indicate a set of legislative dispositions which in 2012 introduced, among other provisions, the obligation of written contracts for the sale of agricultural and food products whose delivery takes place in the Italian territory. The purpose is to contribute to the balance of the supply chain, in line with the tendencies developed by the EU, but it highlighted the fact that small companies are not sufficiently equipped to use written contracts.

The operator has also the chance to use the arbitration and mediation services of the Chambers of Commerce system, by inserting a specific clause during the online negotiation. The members of the exchange can also benefit from a series of additional services, such as insurance coverage for traded contracts.

Improving market transparency: collection and dissemination of price information

When dealing with prices, two issues overlap: the mechanism of price discovery - here intended as information on prices resulting from trade - which is present in commodity exchanges and marketplaces in general, performing an important informative function, and the role of price verification and dissemination held by the Chambers of Commerce.

The price for a particular commodity verified and disseminated by Chambers of Commerce has a twofold value. From the point of view of private law, pursuant to Article 1475 of the Civil Code, it makes it possible to solve the problem of the lack of price in a sale contract. Secondly, it implements a function of general interest, by disseminating among the operators information on prices to ensure greater market transparency. The prices collected and published by Chambers of Commerce, are also the benchmarking prices used by the Italian National Institute of Statistics (ISTAT) for the analysis of wholesale market trends.

Therefore, it is evident how crucial collecting these prices in the most accurate way possible is. Still today, the system of price collection is characterized by a high rate of non-uniformity. The Chambers of Commerce collect prices of agricultural and agrifood products using different methods, only for certain groups of products, and with a different frequency (generally weekly or monthly). Moreover, not every Chamber fulfils this obligation.

The sectors covered by the Chambers' data on prices are: cereals, flours, by-products and fodder; live animals; grapes for wine and wine; fruit and vegetables; milk and dairy products; oil; meat; cold cuts; fish.

With respect to the methodology adopted by the Chambers of Commerce for the collection of wholesale prices of agrifood products, two main modalities can be identified: the Price Commissions and the Price Offices.

The Price Commissions are composed of the economic operators of the supply chain, sometimes integrated with technical experts. These commissions can be located within one of the physical commodity exchanges still open and are the most used tool to collect prices by the Chambers of Commerce. The collection method of the price commissions is the contradictory procedure.

In the contradictory procedure, the different actors of the supply chain declare the information on prices they possess. These data derives from the daily working activity of the operators and from the transactions concluded in the province in the week preceding the collection. Members of the commission can also take into consideration the prices collected by other Chambers of Commerce.

The result of the contradictory procedure is a double value: the minimum price and maximum price. In some cases, the medium price can be an alternative. The majority of the members of the commission should agree on each item on the price list, and in the event of a tie the President has the final say. In case of doubt or difficulty in establishing prices, the President of the Commission can require the exhibition of the contracts concluded on the days preceding the commission's meeting.

The Price Offices are internal structures of the Chambers which conduct surveys involving the operators of the supply chain, used most frequently by the smallest ones. The collection method used by the Price Offices is interviewing.

For the purpose of the wholesale prices definition, the price offices interview market participants belonging to different categories: wholesalers, producers, processors, brokers and mediators. As for the retrieval of the contacts, different solutions are adopted. The most widely used method of survey is telephone interviewing performed by the staff of Chambers.

Other methods are forms filled in by the operators and sent to the Offices. With regard to prices, the operators are requested to provide the minimum price and the maximum price of the negotiations occurred in the reporting period. In some cases the data are filtered before being processed, in order to exclude data which deviate excessively from the others.

Furthermore, certain Chambers which do not have Price Commissions and Price Offices take as a reference the prices issued by the wholesale markets. This is particularly true for the fruit and vegetables sector. In the wholesale markets the collection is made by specialized interviewers. They interview the market operators and ask them the prices applied in the period of reference. Besides the price, the interviewers register also the variety and quality of the product traded. Since 1996 the consortium Infomercati has been gathering and coordinating a network of Italian and European wholesale markets, sharing information and trying to homogenise price collection methods. In particular, the Italian wholesale markets adhering to the consortium send data on minimum, maximum and prevailing prices. They also adopt a uniform coding which allows the comparability of products.

From what written above it is possible to remark that the official price does not necessarily derive from the actual price of the exchanged products, they are rather discussed and declared by the economic operators involved by the Chambers of Commerce and commodity exchanges. This mechanism leaves room for possible distortions in the formation of official prices, mainly considering that dominant positions could manage to prevail on the weakest parties of the supply chain.

Within this context, the BMTI is an additional informational tool of collection and dissemination of wholesale prices of agricultural, agrifood and fish products. The BMTI publishes a weekly price list, containing information on prices and quantities of products traded online in the exchange. Prices and quantities are automatically recorded by software, and the companies acting in the exchange remain anonymous.

Therefore, the price disseminated is not a simple estimate, but a price calculated as a weighted average of the traded quantities, having as a reference the contracts really concluded. Considering the fact that the ICT allows the immediate recording of price and quantity, the information provided is timely and immediate. The categories of products covered by the weekly price communication of the BMTI, belong to the products negotiable on the exchange: fruit and vegetables, cereals, wine, industrial crops, olive oil, milk and dairy products, poultry and rabbits, cattle, pigs, cold cuts, fish, preserved vegetables, animal feed and fodders, biomasses, and timber. All these data allow the BMTI to implement a wide array of studies and analyses on market dynamics and trends, in addition to the weekly price communication. BMTI's analyses are also the reference for Italy for the FAO Global Information and Early Warning System. It goes without saying that the more the quantities traded are considerable, the more the prices recorded are representative.

Conclusion

The growing trends on the use of Internet to trade goods make it possible to forecast that tools like the Italian Online Commodities Exchange can have a wider diffusion in the future, despite the high rate of resistance to technology in the agricultural sector. Moreover, the BMTI was born rooted in the Italian reality but it is gradually opening to the outside. In fact it is working to extend the benefits of the online exchange, currently open to operators with the registered office in Italy or in a EU member country, to non-European ones.

The main beneficiaries of such digital tools are undoubtedly smallholders and farmers, the backbone of the agricultural production especially in the Mediterranean region. They can gain a competitive advantage both in terms of easier market access and acquisition of business information. To conclude, there is another not negligible dimension to take into consideration. IT systems matched with shared and not discriminatory rules and free access to reliable information can remove the distortions restricting the availability of food, thereby creating the conditions for improved food security.

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