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# Guest editorial: How to connect producers and consumers: impacts of platforms on the design and the functioning of agri-food value chains?

Nowadays, the agri-food sector faces many challenges (Bellon-Maurel *et al.*, 2023). They mainly relate to several elements such as the environment, with the necessary reduction of fertilisers, pesticides and carbon footprint; technological innovations, with the development of digital technologies and services; societal expectations, with the need to reconnect producers and consumers; nutrition and health, with the growing demand of consumers for healthy, local and fresh foods, and economic aspects, with the request for just and fair agri-food chains. These challenges are changing the design of agri-food value chains and the relations among actors involved in a constantly evolving context, where digital technologies and solutions are developing and facilitating access to information (El Hadad-Gauthier and Piot-Lepetit, 2022). In changing agri-food value chains, digital technologies and solutions are fostering a shift from a mode of interactions based on products and physical contacts to virtual exchanges based on the creation of new proximities, not limited to regional aspects but extending to common and shared values such as those related, for instance, to cultural, environmental or nutritional considerations. With these new proximities, digital technologies and solutions promote and support the personalisation of the services offered, pushing the development of human-centred digital innovations (Piot-Lepetit, 2023). Along these digital innovations, the interfaces developed to connect producers and consumers are multiple (e.g. platforms, apps, etc.), but require the construction of a relationship of trust to allow the absence of direct contact. This trust can be developed based on both a close identity and the sharing of strong values (e.g. support for the local economy and sustainability of practices) between producers and consumers. These new proximities lead to an increased need for transparency, e.g. on the products and production and distribution processes implemented, with also a growing demand for knowledge of the actors in the value chains and their values, which induces more and more the co-construction of shared information and innovation (Piot-Lepetit and Florez, 2022).

The adoption of digital tools goes hand in hand with greater autonomy *vis-à-vis* the players in the sector. Digitalisation can enable producers to gain market power by reducing their dependence on other players in the supply chain. The farms that make the most use of digital tools are developing a strategy for controlling dependency by focusing more on short-distribution channels and thus reducing the number of intermediaries (Aubert and Mione, 2024).

Digital platforms have emerged as a global phenomenon challenging existing businesses through the introduction of new production, consumption and distribution patterns, reshaping the way farmers, institutional structures, entrepreneurs and consumers communicate and organise themselves in the agri-food value chains. As new intermediaries of business activities, digital platforms play an important role and are becoming key actors of the agri-food sector by facilitating connections between actors (producers, advisors, transformers, distributors, retailers, consumers, etc.) at the different



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levels of agri-food value chains. Thus, digital platforms can be defined as either technology-based business models that generate value for its developers and users by means of digital channels or ecosystems where distributed actors and networks interact, share information and access a wide range of products, services or knowledge in real time (Piot-Lepetit, 2023).

By facilitating logistics and information exchange, platforms have the potential to revolutionise the organisation of supply chains. Behind the generic term “platform” lies a diversity of intermediaries in terms of status, operation, customer base and scale of supply. Each organisation offers different possibilities in terms of bringing producers and consumers closer together, managing transactions and balancing power (Guillot *et al.*, 2022). Producers therefore need to choose the platforms they use carefully, depending on their objectives. While these platforms can facilitate the exchange of information and limit certain costs associated with marketing, they can also create asymmetries of power and imbalances in the sharing of information and value (Guillot *et al.*, 2023). The instability of the sector and the arrival of digital and distribution giants raise many questions about the changing role of these platforms in the food supply chain (Guillot *et al.*, 2024). In this context, vigilance on the part of producers and researchers is essential to better understand the diversity of these new players and which platforms are best suited to their needs.

As digital platforms now exist through the entire agricultural value chains, the special issue provides an overview of the last research development on specific unexplored elements of the use of digital platform for connecting producers and consumers. Throughout agri-food value chains, digital platforms can support the development of short food supply chains, the distribution of fresh products to consumers, the management of food waste and knowledge sharing, among others.

For short food supply chains, especially for small stakeholders and family farmers, distribution processes are costly. Cramer, F. and Fikar, C. investigate how crowd logistics can be used to increase the reach of farmers in rural and urban setting and found that this approach allows to support local agriculture and facilitate the distribution of perishable foods at the cost of minor food quality losses. Drawing on this context, Saucède, F. and Vidal, D. explain how platform openness impacts user value, which extends beyond utilitarian aspects to produce components of hedonic, symbolic and linking value. While platform openness directly influences user utilitarian value, it also leverages behavioural (framing user interaction) and cognitive mechanisms (influencing user abstraction level) to shape a value co-production process that transcends the online environment and also occurs when users meet physically. Considering e-commerce, Hu, L. *et al.* explore the impact of digital platforms in the internationalisation in China – platforms intervening with resource integration mechanisms, alignment to the cultural context and mediating firms’ digital presence in the market. The platformisation dynamics also reveal the existence of enablers and constraints that must be considered in firms’ internationalisation.

When dealing with fresh agricultural products, Wu, S. *et al.* explore different kinds of contracts and governance to be implemented at the pre-sell stage of fresh products in wholesale supply chains, while Liu, Y. consider the impact of information sharing and the related costs on network generation, freshness-keeping effort and the coordination of the supply chain by implementing revenue sharing and cost-sharing contracts. Guillot, R. *et al.* consider the transaction cost theory and demonstrate that specific assets, behavioural uncertainty and membership in a platform network are associated with more integrated governance forms.

In order to support the management of farm-to-food waste reduction, Mueller, S.M. *et al.* present how a platform for innovations across supply chains can help differentiated products

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for consumers and help reduce farm-to-food waste. Finally, Zamil, A.M.A. *et al.* investigate the best and more relevant model to capture the factors of adoption of Internet-of-Things platforms in the agricultural sector, providing insights on the elements that matter the most for farmers when considering the use of digital platforms.

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