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A Consideration on Social Innovation and Sustainability in Agri-food Business

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1. Introduction

In the updated edition of '*Food Wars*', Tim Lang and Michael Heasman (2015) describe the dominant approach to food and agriculture in the 20th and the beginning of 21st centuries as mass production of food through the industrialization, amplification, and globalization of both agriculture and the food-processing industry. According to the authors, this intensive approach to food production was not only innovative and cheap, if one leaves out the costs of negative environmental and health related externalities, but it also reshaped the aspirations and norms of entire societies. One of the main societal consequences of this development was the change in entire food cultures, as can be demonstrated by altered relation with their food between different generations of Japanese consumers.

Throughout much of human history, food was closely related to politics as a source of power and energy. However currently, people and food have become detached from each other due to the successful performance of the contemporary agri-food industry when it comes to productivity gains, development of distribution networks, convenience and accessibility of food for the larger part of the human population.

However in this day and age, growing number of innovations in agri-food business

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happens through the activism of concerned environmental and food movements, Non-Governmental Organizations (NGOs), and individual consumers who make their own (informed) choices. They are the ones who try to define what good quality is and sustainable food means or should be, as many contemporary consumers have become disconnected from the origins of the food they consume (Goodman et al., 2012).

2. Why social innovation is relevant for the field agri-food business studies?

By expressing ethical or, in other ways, conscious shopping behavior and food consumption can reflect lack of satisfaction about the present situation within the current conventional agri-food business sector, as well as dissatisfaction with the society that is mainly based on consumption. This observation extends to employment practices, corporate social responsibility, environmental management, health concerns, supplier relations, etc., by the global food industry and the international retail sector (Dorfman, et al., 2012; Gereffi and Christian, 2009). Obviously, there are examples of multinational food companies that try to source locally in order to support local communities, which can truly be a foundation of profitable relations for small-scale farmers or companies, workers, women or other marginalized groups and communities. A well-known example in Asia is Hindustan Unilever, which has lifted millions of Indians out of extreme poverty through its local approach to supply chain management.

From the perspective of doing business in the traditional way, this might be a logical, strategic and reasonable adoptive behavior but from the perspective of social innovation theory, which prioritizes the resolution of societal challenges and the creation of public value rather than the maximization of economic profit, this is definitely not the case. In fact, this unfair situation has led to creation of a variety of alternative agricultural initiatives and food startups that are no longer part of the current agri-food sector and can be considered as alternative to or outside of the present food system (from production to disposal of waste). Broadly speaking, the individual consumers who for example buy organic, local, fair trade or other products can be described as members of a food system inspired by weak 'alternativeness', i.e. driven by an emphasis on the food itself (Watts et al., 2005). Strong alternativeness, in contrast, is expressed through different shopping and organizational behavior that prioritizes the social networks through which the food passes during the provisioning process (Watts et al., 2005).

In its special edition on food, *The Economist* (2006) referred to the phenomenon of weak alternativeness in the food system as “*voting with your supermarket trolley*”¹⁾, a concept similar to the ‘vote with your fork or chopsticks’ approach of individualized responsibility. As one can imagine, this holds consequences for many consumers because of the strong connections between agriculture, food, the natural environment, social relations, and our own existence as human beings. Even though the alternatives have introduced many radical novelties and are very innovative in their operations, their main reason of existence is based on market failure, and incompatibility with the present system and its lack of enough social innovations. Social innovation is a transformative process in which multiple actors collaborate to address societal challenges beyond the capacity of existing market and institutional mechanisms by reshaping social relations, practices, and value norms to create social value (figure 1). These agri-food entrepreneurs carry the seed of transition towards a new system of social innovations and therefore another set-up or (re) configuration of the existing food system and agri-food businesses (Grasseni, 2013).

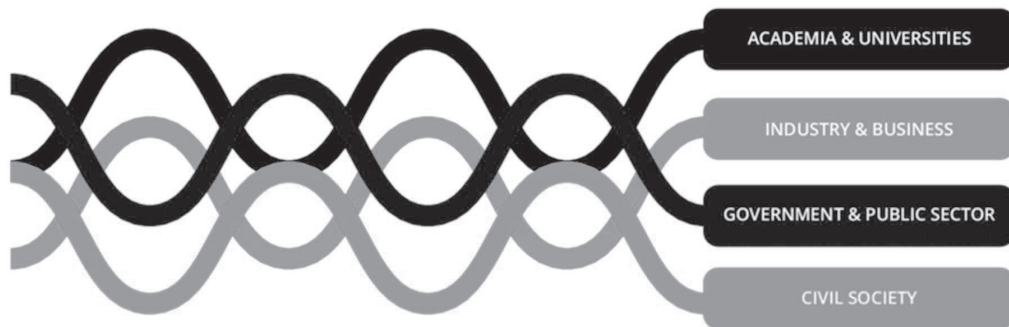


Figure 1 Social innovation helix

Source: Author's illustration based on the Quadruple Helix model (Etzkowitz and Leydesdorff, 2000; Carayannis and Campbell, 2010) and EU Social Innovation policy frameworks.

Understanding whether a food provisioning system is running in accordance with a defined set of rules or not can be marred by multifaceted innovative processes without clear outcomes and solutions. However, studying these innovations and their consequences is fundamental for the understanding of possible sustainable transition path ways. According to Geels (2011), this duality of positive innovation processes and negative consequences without clear outcomes implies that the transition towards a more sustainable food system is based on interactions between public sector, and industry and

businesses, civil society, and technology coming out of universities and research centers. The results of interactions between these elements have already had a sweeping effect not only on agriculture but also on choices related to food consumption and lifestyle at the individual level (Popkin, 2009). The process of progression from the pre-industrial to industrialized food system has been complex and non-linear in its introduction and application of social innovations, and transition from one stage of economic development to another (Geels, 2011). The modernization and industrialization of agriculture and globalization of the food industry, while undoubtedly leading to progress, have also led to major costs in terms of health, the economy, climate and environment (Popkin, 2009). These concomitant expenses have been largely overlooked and have accumulated to ominous levels as the hidden costs of economic development in the agri-food sector.

Altogether, social innovations in the agri-food sector provides services for societies and produce both public and private goods (Markard, et al., 2012). For a transition towards sustainability and therefore general change of the entire food system, such innovations would also imply change in social and cultural practices of both producers and consumers, as well as institutional adjustments of governmental policies, regulatory frameworks and new governance models for agri-food businesses (Markard, et al., 2012). These changes have to be accomplished through formation of new alliances, execution of experimental plans, and evaluating and observing the progression towards higher levels of sustainability (Loorbach and Rotmans, 2010). In this context, Markard et al., (2012) recognize the different roles actors play in the transformative processes and acknowledge that these roles can be seen as being in conflict. Yet, tensions and conflicts are crucial for innovation (Dosi, 1988), as Schumpeterian '*new combinations*' (Croitoru, 2012) are necessary for change and eventually arriving at new social innovations.

Growing involvement of the civil society in the way food is being grown, cultivated, harvested, processed, distributed, sold and consumed is a powerful signal of coming change and transition. The increase in private labels and standards in trade can be added to this trend. Hence, social innovation for the food industry could be based on the model suggested by Renting and Wiskerke (2009): including public sector, private sector, and civil society into a new governance system capable of a responsible and sensible transition towards a sustainable food system. Redefining agri-food business governance mechanisms is therefore necessary and even crucial for their survival in the future. The challenge is

to integrate the innovations into the existing food supply chains, which are often at odds with these initiatives in terms of policies, practices, and governance (Renting and Wiskerke, 2009).

From the brief introduction into the theory of social innovation, it becomes clear that it is quite suitable for framing and addressing the present state of affairs in the agri-food sector and analyzing the Japanese food system in a broader perspective. The idea of social innovation can be helpful in understanding the rise of new sustainable agri-food businesses outside the realm of the existing industrialized and globalized agri-food complexes and conglomerates. It is important to understand what the critical success factors are, and which barriers may arise during the participation of new stakeholders in social innovation projects and initiatives. Understanding how such processes can be initiated and evaluated through the core concepts of innovation theory, with its interplay between industry and innovative niches, is therefore crucial.

3. Sustainability and the agri-food sector

Much of the 20th century's administrative, scientific, and commercial innovation efforts have been centered around the availability of food: *"real advances were made, measured in terms of delivering more food for more people affordably"* (Lang, 2010; p.87). This approach, however, has enabled the currently prevailing model of global food supply chains dominated by food retailers. These retailers act as the gatekeepers between producers and consumers (Lang, 2010), controlling (but not always owning) interrelations between production, processing, distribution and consumption of food (Hendrickson and Heffernan, 2002; Kanefal, et al., 2004).

However, after several years of focus on sustainable innovation within this model we can observe a number of thoughtful changes taking place in many corners of the world including Japan. Witnessing alternatives at the grassroots level provides insight into the ways nature is being managed, agriculture is conducted, industry is processing food, supply logistics are organized, and food is being put on the market, sold and consumed (Goodman et al., 2012). According to De Schutter (2014) an evolution is under way from a market space for commodities into a space where inclusive values and reflexive meanings are being created. At the same time the process of scaling up production and concentration of power is still going on. Nevertheless, this transition is

‘embedded’ in shared experiences and more personal relations within a socio-economic environment that emphasizes the human dimension of the food system(Winter, 2003; Sonnino and Marsden, 2006; van der Ploeg, 2010; Schneider and Niederle, 2010).

The centrality of food and its value are reemerging in public discourse and practices after a period of oblivion that coincided with the recent phases(1950s-1970s and 1990s-2000)of globalization, amplified by liberalization of international trade in agricultural commodities. Despite the focus on large-scale and industrialized when it comes to innovation and sustainability in agri-food business activity, there is in fact still a lot of small-scale farming and food processing present within agriculture especially in Japan. These small businesses are important for employment, the economy, landscape management and the cultural heritage of local communities, and fit well with the trend of shortening food supply chains(Brunori 2007).

Additionally, there is a strong awareness among innovative producers and consumers that a real paradigm shift is needed towards more sustainable production and consumption of agricultural products within the existing sector. However, there are substantial differences in the development paths within this transition, as sustainable production and consumption are defined in very different ways by different actors. One of the main examples of this change is the growing number of producers and consumers who are organizing themselves into food networks, which tend to represent a sustainable alternative to the industrialized food system(Wiskerke, 2009). These alternative food networks depend on their embeddedness in broader social networks. They can renew the lost connection between producers, nature, land and the consumers because they not only add innovation to the food supply chains but also reintroduce the lost social component to the industrialized agri-food business. These social components include the need for cooperation, resilience, reduction of alienation, valuable relations and solidarity, which represent social capital, trust, and increase adoptive capacity. Networks based on these values also tend to approach the environmental and economic aspects of the food system in a different way.

4. Scaling-up of sustainable innovation

The mainstreaming of these alternative food networks requires understanding of the transition processes that are taking place in the current food system. As Ernst Friedrich

Schumacher (1973) noted in his book '*Small is beautiful*,' the small and large scales are not necessarily mutually exclusive. Schumacher's main ideas remain fresh as he proposed seeking smart combinations of innovative and conventional methods, leaving polarized thinking behind and taking the road to innovative arrangements. These should combine characteristics of small- and large-scale systems, integrating them into a new reality in the world of agriculture and food.

Such a vision fits in well with more recent ideas that have been developed about the role of the new post-crisis economy, which should have a more human scale with co-creation and community building as its central assumptions. These ideas revolve around value creation among involved parties based on reciprocity and direct relations, connectedness, and improvement of the quality of life through creation of coalitions around sustainability goals (Jonker, 2013). The relevance of this development in innovation is crucial for the society beyond the interest of agri-food business. A window of opportunity for profound change can be afforded by understanding how the current food system can be readjusted. Through the social innovation and (re)introduction of values represented by food networks, our food system can be altered to meet current and future societal, environmental and economic demands (Renting, et al., 2012). Finally, a broader transition can be achieved towards a more sustainable way in which we can produce and consume our food when the contextual environment of the different countries is also taken into consideration. Civic and farmers' initiatives that translate these thoughts into practice have been evolving swiftly during recent years. Coherence is created through synergy of the different characteristics of this sustainable food and agricultural innovation movement, united into new practices that are collective, bottom-up, and based on a shared rules and values.

Sustainable innovation in agri-food business goes beyond the ability to feed the people from both urban and rural areas and intends to become one that will also provide evolved answers to changing societal needs. It will have to address such pressing issues as inequality and poverty, fairer distribution of food, democratization of supply chains, and access to markets and services. Initiatives introducing sustainable innovations strive to provide new cultural roles for both producers and consumers, offering noticeable results in terms of professional occupation, social inclusion, additional socio-economic value, environmental protection, and education. Thus, rather than being a strictly agricultural

and economic matter, food represents cultural and social actions with broader ecological and political importance.

This new food system should be inspired by, designed, and managed according to the functioning of natural ecosystems. This would allow for a translation into agro-ecological and environmentally friendly farming activities that allow for closed production cycles with respect to resources and increase farmers' autonomy from commodity markets (Altieri, 2002). This also implies a transition from 'traditional' research and development by the agri-food business based on efficiency maximization of natural resources to the pursuit of sustainable agro-ecological and environmentally friendly optimization. Through reconnecting agriculture, environment and food, a basis can be established for shared values and collective action. Earlier academic inquiries (Brunori, 2007) suggest that these values are based on a co-operative framework and contain networking, trust and formation of mutual knowledge, the education of both farmers and consumers, smart growth through creation of employment opportunities at the local level, sustainable rural development by contributing to the protection of natural capital, environmentally sound and climate-friendly practices and behaviors. In Japan, a diversity of sustainable practices and behaviors can help to create a more resilient and viable food system as can be seen two presenting the agricultural heritage systems in Osaki Koudo²⁾.

5. Discussion and Conclusions

Consequently, we are witnessing an increase in new forms of collective action, such as civic food networks but also covenants, round tables and green deals between the food industry and civil society organizations and NGOs (Giovannucci and Ponte, Renting et al, 2012; 2005; Zagata, 2012). These can be understood as new forms of social innovation and sustainability. Thus, the societal needs for a more sustainable, just, and resilient food system could be satisfied through social innovation for food and agriculture achieved through collective action. This concept of the social innovation (presented in Figure 1) can be seen as a key factor in understanding new pathways for sustainable transition to a new food system. In this setting, civil society assumes a new and more active role in promoting innovation. It is able to move beyond its initial focus on production to mobilize citizens as involved consumers, and to include the significance of 'good or quality food' as an important feature of change (Renting et al., 2012). Also the rise of facilitative and

socially oriented enterprises needs reassessment through the lens of bottom-up organizational approaches and grassroots innovation initiatives (Hargreaves et al., 2013). Hence, networks that are established around food and function on a relational understanding of producer and consumer relationships can be considered as expressions of innovative behavior within the current food system.

This current system is largely steered in the direction of homogenization of agricultural practices by global market forces, such as international trade treaties, product certification, and technological standardization (Fonte, 2008). In contrast, the vision of innovative food networks is built on the ethics of sustainability, social justice, animal welfare, environmental and resource management and protection of artisanal cultivation and production methods (Goodman, et al., 2012). Such practices are also part of the process of establishing a new knowledge base for contemporary economy and culture. *“That trend is reinforced by redefinition of the social functions of agriculture and food and by new pressing objectives of environmental sustainability and ecosystem management”* (Fonte, 2008; p.218). One of the critiques of mainstream food supplies is the value chain concept and the way that it primarily refers to actors economically involved in growing, processing, distributing, selling, preparing and consuming food. The concept of a network is a way of going beyond the value chain approach and a way of incorporating the practices, values and strategies of actors and social groups not directly (economically) involved in shaping food provisioning practices and agri-food business networks.

Ultimately, the value of a sustainable innovation can be identified through answering the question of whether it serves as an instrument for transition and consensus-based unity of people and businesses, which have participated in the process of its establishment. Of course, one may call upon the powerful actors that make up the industrialized food system (such as input suppliers, food processing industry, traders, intermediaries, wholesalers, and retailers and their buying desks) to be reflexive, sustainable, fair, and innovative. However, it is uncertain whether the agri-food sector would act of its own accord to align with these public interests, purely out of a sense of social (and corporate) responsibility. Business is by nature focused on obtaining maximum benefit for its owners and shareholders, as clarified by Milton Friedman (1970) in his famous economic doctrine. Consequently, a new social innovation, its measures, and rules of engagement should offer a model for the agri-food sector in which it can innovate and make a profit framed within

the broader context of societal needs and interests of stakeholders affected by the contemporary food system.

Notes:

- 1) The Economist. Special report: food politics. Voting with your trolley. Can you really change the world just by buying certain foods?
- 2) Osaki Koudo, located in northern Miyagi Prefecture, is one of Japan's major rice-growing areas, sustained by water management systems that overcome natural constraints and by strong local cooperation. The overview is based on information provided by the Ōsaki Kodo's official website. (<https://osakikoudo.jp/about/osakikoudo>. Accessed on October 30, 2025)

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タイトル

農業及びフードビジネスにおける社会的イノベーションと持続性に関する一考察

要約

本研究は、社会的イノベーションの視点から、現代の農業及びフードビジネスが抱える課題と、その持続可能な転換の可能性を検討した。持続可能な食料システムへの転換は、技術革新や効率化だけでは達成されず、社会的関係、価値観、制度の変化を伴う総合的なプロセスであることが要請された。また、社会的イノベーションは、その転換を支える重要な概念となり、これからの農業及びフードビジネス研究や政策立案において、中心的な役割を果たすものと考えられる。