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Special issue: New and sustainable food and agribusiness management models

Review and prospection for food and agricultural business model innovations in emerging economies

EDITORIAL

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Abstract

Even for industries that are traditionally being perceived as ‘traditional,’ such as the food and agriculture ones, business models and its innovations are critical for the industries’ sustainable development. Nine interesting articles in this special issue are reviewed with sincere prospections that might push the research and practical frontiers further. Suggestions in cross-level investigations, international and diverse contexts and research practices, as well as the interactive, dynamic, and evolutionary intersections between the technological and managerial sub-systems of food and agribusiness model innovations are discussed.

Keywords: business model, innovation, emerging economies, agribusiness, food industries

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1. Introduction

Agriculture and agricultural zones in emerging economies have been cognitively connected to the impressions of poverty, low-tech, less advantageous demographic structure, low speed of development, etc. (e.g. Bottema, 2008; Bourgeois *et al.*, 2006; Hanjra, 2013; Kamrath *et al.*, 2018). Recent years, however, have witnessed new opportunities for agricultural transformation in emerging economies (Blok *et al.*, 2018; Haedicke, 2016; Huang, 2011; Long *et al.*, 2017; Ringelberg *et al.*, 2018; Walsh, 1975). For example, new information technologies and platforms have facilitated direct selling and marketing of products (e.g. processed foods or medicine) to the consumers, and have created new ways of agribusiness operation and management (Gunderson *et al.*, 2014; Zeng *et al.*, 2017). More technologies (e.g. radio frequency identification) and schematic models have been applied to the supply chain, food safety, governance, and other areas, to overcome informational and managerial problems (Auler *et al.*, 2017; Conto *et al.*, 2016).

What is more important is to build a sustainable business and/or economic model (Da Costa *et al.*, 2014), even ecosystem, to ensure new value proposition and shared value creation (Cucagna and Goldsmith, 2018; Long and Blok, 2018). Research should be open to creative inquiries for the phenomena incorporated in the progress of food and agribusiness models. Issues covering the following are especially exciting: new agribusiness business models in featured industries (e.g. Chinese medicine); new technology (e.g. Internet-of-things, bio-tech, etc.) influences on agricultural transformation; new paradigms (e.g. value co-creation, sharing economy) influences on agricultural transformation; marketing for agricultural products and services; logistics and (international) supply chain management for agriculture; agricultural modernization's effects on economic, social, political, or other consequences for sustainable development; new agriculture, environmental sustainability, and business and economic outcomes; entrepreneurship and incubation in agricultural industries; special context/types of agribusiness (e.g. family agribusiness); decision-making and risk management; agribusiness education; public policy and governance; among others.

In this special issue, we have intellectual contributions from different (groups of) authors who are brave in exploring innovative research topics that might fall in, or at least are related to, the abovementioned issue. In the next section, I shall both summarize those studies and also reflect from their contributions to share imagination for future studies.

2. Published papers and projection for future studies

In this section, the articles published in this special issue are reviewed and discussed specifically, in a way that the core of the studies and the imagination extended from their contributions are paralleled. To benefit the review, this article uses two theoretical axes to form a taxonomy of the published papers. The first axis is the level of analysis (i.e. macro- versus micro- levels), and the second axis is the foci on either technological or managerial aspects of the phenomena researched. Finally, a four-cell typology is created and the discussion will follow the order of the cells (Figure 1).

The first group of studies are those focusing on in the macro-level technological issues. First among them, is the paper by Hou and colleagues (2020). This paper investigated food-traceability and certification systems, which have been widely perceived as a major way for improving food safety for consumers. The issue concerned was the impact of differentiated information contents on market performance resulted from consumers buying preferences and decisions. Utilizing experiment-based methods, the authors found, in a large sample (n=2,121) from China, that 'Chinese consumers prioritized the certification of a traceable-pork safety-information attribute. Furthermore, consumers were willing to pay extra costs in order to obtain traceable safety information. However, this additional expenditure should account for no more than 30% of the price of ordinary pork, or consumer demand for safe pork decreases. Results of a market simulation also identified a type of traceable pork that had an optimal combination of attributes and met the needs of Chinese consumers.' Such results guided us to think more seriously the contents generated by the information technology but not just the technology per se, for a better food safety governance.

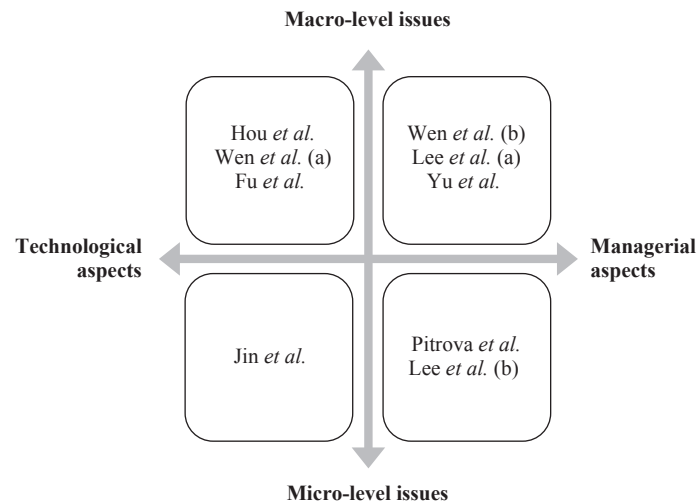


Figure 1. A research typology of the published articles' themes and foci.

Wen *et al.* (2020) conducted a review for an increasingly applied technology for food and agriculture industries – the radio frequency identification (RFID) applications. They explore the literature discussions on the adoption of RFID technologies for specific uses in food safety facilitated by information traceability in the context of food supply chain. According to the authors' review, several trends in this research topic have been identified. First, studies commonly found that RFID is a technology with merits (e.g. information transparency of food products, data exchange standardization (uniform), quality control, etc., for governance and marketing in food supply chains. Second, studies also commonly pointed out some disadvantages for both scholarly and practical attentions. Third, publications are currently evenly distributed in terms of the appearance in different journals, the choice of topics, factors researched, etc. Overall, we learnt from this review article that it is promising to have the RFID technology in mind when making theoretical and practical attempts to improve food safety and governance. What we also learnt, though, is that the research stream concerning RFID and its intersection with food management is yet at its infancy stage of development. More efforts from future studies are definitely needed for the topic's further development.

Also putting an advanced technology at the central of the stage was the case study brought by Fu and co-authors (2020). Very creatively, the authors initiate a conversation on the long-cared problems in agri-food supply chain management studies (e.g. opportunism) from a strategic technology adoption perspective, which went way beyond the traditional economics (e.g. contract) or sociology (trust mechanisms) logics. The two cases presented demonstrated good coupling between blockchain-based digital systems and the agri-food supply chain, in that the former can facilitate disruptive innovation in the processes and structural designs of the latter.

The second group of studies are those focusing on in the macro-level managerial issues. Yu and colleagues (2020) offered a choice experiment study of family agribusiness to investigate these grain family farms' preferences for different governmental support policies. The results found that grain family farms strongly prefer agricultural subsidies, credit support, technical support, together with a good policy communication channel. Moreover, grain family farms gain higher profit margin when they are highly educated, owning reasonable operation scales, and having good understanding of the support policies. Unlike a normal business survey, this study as an academic one also derived four types of for policy support preference, namely, finance, knowledge and technology, land, and informational preferences, which are of theoretical reference value for future studies.

In 'New agriculture business model in Taiwan', Lee and colleagues (2020a) concentrated on the area of crop production and introduced and discussed Taiwan's agribusiness models in recent years. From past to now, Taiwan has been replying on agriculture for economic gains. What has been changed is the role played by

creativity, innovation, and entrepreneurship in technological and managerial aspects of agribusiness operations. Starting with a historical background, this paper depicts the developmental progresses and possible future of agribusiness model renewal.

Every business has its social dimension and responsibility. Wen and co-authors (2020) brought such vital dimension into the theme of business model innovation in the food industry. Standing on a critical viewpoint, opinions for suggesting a better and more sustainable social innovation agribusiness society are offered, including better employment of resources, sustainable development, generation of finances and talent pool diversification. By comparing and commenting on the various contemporary social innovation practices, the potential path to achieve food productions, distribution, and safety are well identified.

The only study falling in the third cell of the typology is focusing on in the micro-level technological issues. Traditionally, food and agribusiness naturally operate in the ‘offline’ world. In the most recent years, however, internet technology and commerce models have penetrated into almost everyone’s life, including the food producers and farmers of any kind. Jin and colleagues (2020) grasped the opportunity to explore the intersectional influences of online-world factors on farmers’ subjective well-being. The online-factor was chosen from an institutional landscape, namely, the rural e-commerce services. They found that Alibaba as a world-famous e-commerce enterprise group also offers helpful e-commerce support for other agribusinesses, leading to good subjective well-being of the agri-businessmen (or at least business workers), the farmers. This study linked institutional-level policy-support, meso-level business services, and micro-level psychological state, turning out to be a good example for future scholars to explore cross-level phenomenon.

The fourth group of studies are those focusing on in the micro-level managerial issues. In ‘Intellectual capital for green accounting in agribusiness’, Lee *et al.* (2020b) worked on green accounting as a trending practice for agricultural firms. Green accounting urges firms to pay attention to an environmentally friendly thinking when firms implementing financial and accounting tasks. While green accounting is an important new practice for companies, its theoretical role should be formally discussed with important factors or perspectives. The authors take such responsibility and adopt an intellectual capital view to make clear some critical factors that might influence the effectiveness of agribusiness green accounting. They concluded faithfully, that ‘... competent farmers (human capital), good relationships with stakeholders (relational capital), structural changes (organizational capital), and innovativeness (innovation capital) all of which are concepts of IC are needed for the implementation of environmental sustainability policies and procedures within an organization.’ For practical implications, this paper guides agri-organization managers’ attention and resources towards intellectual capital elements when installing the green accounting systems. For theoretical directions, this article breaks out a new stream of research opportunities by bringing together two emergent literatures.

Pitrova and colleagues (2020) examined the economic impact when organizations choose to diversify into agritourism areas. By shifting our viewpoints of livestock, from treating livestock products per se as food source for human’s physical nutrition to sublimating livestock production systems as spiritual source of human’s psychological health through a form of agricultural tourism, the authors care about the economic payoff that livestock farmers could gain from their diversification strategies of businesses. With scenario simulation methods, this paper also tested the impact of coronavirus lockdown. The results suggested that ‘... diversification into agritourism brings the benefit even under the conditions of one season lockdown and improves the economic output of the beef cattle farm more than the farm-to-table strategy.’ Those said, the role of the farmers has also been shifted from food producers to truly business makers.

3. Conclusions and integrative thinking

In addition to the individual review and discussion for each of the published paper, more integrative thinking is offered here regarding the overall development of the research stream. Therefore, I reflect on the special issue articles as a collection of a research stream. The first noticeable thought is that we need more cross- and multi-level studies. Food and agriculture are two complex areas that are interwoven by a lot of interactive

factors at different levels of analyses. Counting the proportion from the current special issue, more attempts are strongly required to go beyond the level boundary for researchers to display a more comprehensive landscape of the researched world (specifically the agri-business model development). Second, although we could find studies with technological and managerial cares in the papers of this special issue, they present themselves individually and separately. That is, a few have been formally and deeply inquired on the intersection of technological and managerial systems and sub-systems of an agribusiness model. Conflicts and concord might co-exist in the intersections between the two systems in an agribusiness, its business models, and institutions. Therefore, topics such as the interactions, dynamics, and even co-evolution of these two systems are encouraged. Last but not least, international studies are relatively lacking. The meaning of 'international' here are two-fold. First, research topics dealing with co-creation, co-development, and co-governing the food and agriculture business models in an international context can simultaneously fit the current trend of international collaborations in food and agriculture affairs, and stimulate imaginations for the practices of such collaborations. For example, how can international partnerships for agricultural R&D benefit policy emergence of each of the collaborated economies? Are there different journeys for different partnered economies when they try to benefit in different ways from the same partnership relation? What happens if there are conflicts between two partner economies when co-creating, co-developing, and (maybe) co-governing new business models? The second meaning of 'international' is from the aspect of research implementations. For this special issue, only one out of nine paper was done by an author team of international scholars. This can be resulted from the interest in the first issue above that we talked about international. Sincerely, I hope to see more international collaborative research teaming up by essentially internationally researchers from a more diverse set of economies, not just two or three with similar (political, economic, societal, etc.) status to solve shared problems.

Acknowledgement

Fu-Sheng Tsai acknowledges the support from the visiting professorship from the North China University of Water Resources and Electric Power.

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