MOBILIZING AGRI-FOOD MOVEMENTS: ROLES OF ALTERNATIVE AGRI-FOOD SYSTEMS IN ADDRESSING THE RURAL CRISIS IN SOUTH KOREA

by

Soon-Won Hwang

A thesis submitted to the Faculty of Graduate Studies of
The University of Manitoba
in partial fulfillment of the requirements of the degree of

DOCTOR OF PHILOSOPHY

Department of Environment and Geography
University of Manitoba
Winnipeg

ABSTRACT

Over the past decade, concerns regarding food safety and access to and control over food have become widespread in South Korea and are often associated with concerns over the global agri-food system. Large consumer cooperatives that have memberships that can exceed 800,000 members have emerged as a popular and effective way of addressing these concerns. Yet, these important alternatives to the global agri-food system have received little attention by researchers and policymakers alike.

This study investigated attitudes towards an ongoing agricultural and rural crisis and food concerns for consumers and farmers in South Korea. Further, the roles of consumer cooperatives in addressing this crisis and as an alternative to the global food system were documented. Surveys were conducted with 412 conventional consumers and 452 consumers that were members of consumer cooperatives as well as 166 conventional farmers, and 118 farmers that grow food for these cooperatives. In addition, 11 Korean food experts that reflect a wide diversity of stakeholder interests including government, NGO, universities and farmers were also interviewed.

Korean consumers identified that freshness was the most important factor when they purchase foods, followed by food safety and price. It seemed that the global agri-food system is unlikely to address these consumer concerns, in direct contrast to the consumer cooperatives. Public rallies that raised concerns about the import of beef from the US reflected widespread public resistance to agricultural globalization and the pursuit of economic liberalization by the Korean government. Participants perceived that government policies neglected domestic agriculture and were the

primary cause of low rate of food self-sufficiency in Korea. Accordingly, many felt that policies should be legislated that work towards food self-sufficiency and that support Korean farmers and rural communities. Both conventional farmers and member farmers strongly opposed policies that promote industrial economic growth at the expense of local farmers and food systems. Farmers in this study were generally highly critical of the global agri-food system, especially those that were relatively young and well educated. While these farmers have a little opportunity to access global markets, they were adversely affected by unstable prices of imported foods. Yet, member farmers benefitted from their relationships with consumer cooperatives, and earned an 11-30% premium compared to farmers that sell their products to large retail markets. Korean consumer cooperatives represent an important frame for building alternative food systems and for promoting cooperation between consumers and farmers into the future.

ACKNOWLEDGEMENTS

I would like to express my deep gratitude to my advisor, Stef McLachlan, for inspiring me with his mentorship and invaluable advice over six years. My work would not have been possible without his patient guidance and encouragement. His critical and constructive teaching enabled me to pursue social change and justice and to extend my study area beyond the academic criteria.

Special thanks to my advisory committee Drs. Shirley Thompson, Annette Desmarais, and Ryan Brook whose insight and knowledge have greatly developed this study. Dr. Thompson has provided invaluable support and encouragement to my work and thought; Dr. Brook has guided my research methodology and many other parts; and Dr. Desmarais became involved later in the process but provided much insight and experience regarding Food Sovereignty.

I must thank all participants in this survey and agri-food activists and practitioners in Korea. Especially, activists and staffs working devotedly in consumer cooperatives have informed me about their experiences. Their practices and knowledge inspired me with their enthusiasm.

I would like to offer my special thanks to all my colleagues in the Environmental Conservation Lab for their ongoing contributions and encouragement regarding my study and learning.

I would like to express my great appreciation and longing to my father who passed away in the early days of this study. He taught me what I have to do for social justice and progress. Special thanks also to my mom who has supported unendingly even though fighting her illness. I cannot put in words my gratitude for my family, who provided me unwavering encouragement and contributions. Without their endless

support and encouragement, this work would not have been possible. Big thanks to my husband, Byeong-Deok Ahn, and my two sons, Sung-Gon and Myung-Gon, who provided unconditional love and unwavering encouragement to me during these long, tough years.

Special thanks to Eun-Kyung Kim, the president of Sustainability Centre, Jiwoo, who is also writing her PhD thesis. She provides me with a convenient and homely office and shares with our mutual concerns for completing our theses.

I would like to express my great appreciation to In-Ja Lee and Jae-Gee Oh who guided and cared me during staying in Winnipeg. Special thanks to Jung-Sook, Sung-Ae, and Myung-Sun who provided me endless encouragement and consolation in Winnipeg. Without their support and contribution, this work would not have been possible

I am particularly grateful for unconditional encouragement given by my friends, Hyang-Sun, Won-Jeong, Eun-Ju, Mi-Hee, Mi-Wha, and Hye-Jeong, who have shared and worked together for social change and progress ever since our university days.

Financial support for this work was provided by the Social Sciences and Humanities Research Council and Korea Green Foundation.

DEDICATION

TO MY PARENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

THESIS INTRODUCTION

1.1. General introduction: alternative food systems in South Korea

Since the 1990s, two great waves have been observed regarding global agriculture and foods. The first is agricultural trade liberalization as led by the World Trade Organization (WTO) and associated international economic institutions that have undermined agricultural subsidies and trade barriers in order to increase trade equity in the global agri-food system while ostensibly working for food security and rural development in the Global South (Anderson, 2011; Bishop et al., 2011). Contrary to claims by proponents of agricultural liberalization, the transnational agri-food industry has come to dominate the global agri-food system under the WTO, this at the expense of the domestic agriculture in poor countries (Challies, 2008; Flora & Bendini, 2007; Friedland, 2004). In addition, people around the globe have experienced a chronic food crisis including food shortages in the least developed countries, food price volatility, and a recurring food safety crisis (Headey & Fan, 2010, Smith et al., 2010). This, in turn, has resulted in much criticism by citizen-consumers who consider equity and justice in food systems and by small-scale farmers who want to protect people's rights to determine their food choices and food systems (Lehner, 2013). In turn, the emergence of alternative food movements around the world represents the second great wave in the global agriculture and foods sector (Friedland, 2010; Patel, 2009). Those two and often-colliding waves characterize the corporate food regime as supported by neoliberalism and the concept of food security on one hand and agri-food alternatives as informed by principles of food justice and food sovereignty on the other hand (Giménez & Shattuck, 2011).

The globally integrated food supply system provides consumers with several benefits. The corporate food provisioning systems is based on the development of

wide scale transportation and communication infrastructure supplies foods to the countries with low food self-sufficiency or high food shortage around the world. In addition, people can access a wide diversity of foods traded from all regions of the world, these seemingly at low cost and stability of supply (Anderson, 2011). Yet, the global agri-food system is confronted by many difficulties including declines in public trust regarding food safety caused by agriculture related diseases such bovine spongiform encephalopathy (BSE), avian influenza (H5N1), and swine influenza (H1N1); the creation of competing local and niche markets that are meant to meet a wide diversity of consumer demands; and public resistance against global industrial food systems regarding many of the associated and generally externalized social and environmental problems (Hendrickson & Hefferman, 2002; Konefal et al, 2005).

The apparent success of the global industrial food system has been predicated on the over-production of food and a stability of food prices induced by the tremendous growth in agricultural productivity emerging from the Green Revolution in the 1950s and 1960s (Christian & Rashad, 2009; McCalla, 2009; Piesse &Thirtle, 2010). However, agricultural over-production has since been compromised by unexpected external and internal factors including severe climate change, a global energy crisis, agricultural speculation funds, socio-demographic change, growth in biofuel production, and a decline in investments for agricultural research (Burch & Lawrence, 2009; Headey, 2011). In addition, WTO negotiations have been in a deadlock over agriculture over the last 10 years and the global industrial food system has faced a backlash from social and agri-food movements that advocate for local food systems and small-scale family farms as fundamental alternatives to the global food systems (Anderson, 2011; Jackson & Mitchell, 2009; Torrez, 2011).

These alternatives emphasize that local food systems are better able to mitigate risks associated with food safety and environmental decline (Altieri, 2009). In addition, local systems facilitate the protection of small-scale family farms (Izumi et al., 2010). A wide variety of products and farming methods increases the adaptability of these local systems to climate change compared to large-scale industrial and monoculture-dependent farming (Campos et al., 2014). Further, support for small-scale family farms facilitates the rebuilding of rural communities and halts social demographic disruption in rural areas (Feagan et al., 2004). Accordingly, various alternative food systems are being practiced around the world (Guthman et al., 2006; Rocha & Lessa, 2009). Prominent examples include farmers' markets, community supported agriculture, farm-to-school programs, and, of special interest here, consumer cooperatives (Guptill & Wilkins, 2002; Selfa & Qazi, 2005).

Consumers are positioned at the end of the agricultural-retail chains in the global industrial food system. They are recognized as passive beneficiaries of cheap and abundant foods. However, they also experience food price volatility, food safety crises, and inequity (Akenji, 2014; Little et al., 2010; Micheletti & Stolle, 2007; Rainbolt et al., 2012), Currently, concerns around food have become major rallying points for social movements around the world. Many are organizing rallies or participating in riots that challenge chronic food shortages, high food prices, and unjust food policies. The collision between these two global food waves receives much attention by researchers who examine the equity, ethics, and universal human rights dimensions of the global food systems and alternative food systems (Giménez & Shattuck, 2011; Hassanein, 2003, Hinrichs, 2003). This work is being conducted around the world.

Peasants and small-scale farmers in *La Via Campesina*, a global agricultural movement organization, have proposed food sovereignty as a viable alternative to the global agri-food system (Desmarais & Wittman, 2014; Torrez, 2011). They declared food sovereignty as a fundamental human right, defined as 'the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural system' (*Nyéléni* Declaration on Food Sovereignty, 2007). They further founded an international organization, *La Via Campesina*, which advocates for peoples' right to foods and which acts against the current global agri-food system realigned and ruled by transnational retailers and food corporations. As of June 2013, 164 organisations in 73 countries, including Canada and South Korea, were affiliated with *La Via Campesina* (*La Via Campesina*, 2014).

These two waves also strongly influence agriculture in South Korea (herein Korea). Korea has negotiated Free Trade Agreements (FTAs) with 49 nations over the past decade and is currently negotiating with 21 other nations including China and Japan (Jeong et al., 2014; Moon et al., 2014). Koreans depend on the import of over 70% of their foods (Hwang, 2013). Over the last 50 years, Korean agriculture and rural communities have substantially declined. The Korean public is confused by and caught between industrial economic development and the collapse of their country's food production capacity (Lee, 2012).

Korea is characterized by very low food self-sufficiency as well as a small land area and high population density. Indeed, most Koreans perceive food self-sufficiency policy is precluded by industry-centered economic growth. Meanwhile, there has been an increase in public concern regarding the safety of food in the

country. In 2008, rallies in Korea resisting the import of potentially BSE-infected beef from the US were held over a three-month period and upwards of 500,000 people took to the streets (Kim, 2010; Lee et al., 2010). The Korean public also fears imported foods from China, which has provoked food safety and sanitation concerns regarding food production, processing, and distribution (Choi & Kim, 2011). In 2011, the adoption of a free school-lunch initiative for all students in Seoul became an explosive political issue in Korea. After long-lasting debates around the nation, a local referendum was conducted; as a result, the incumbent Mayor of Seoul who at that time opposed the free school lunch program lost his position (Seoul talk-talk, 2011).

The free school meal program had originally been one of the national welfare policies. Subsequently, it embraced food safety concerns and developed provisioning regulations that required schools to provide their students with locally grown and environmentally benign foods. In addition, the Fukushima nuclear accident in Japan in 2011 aggravated longstanding public concerns regarding the radioactive contamination of foods (Hansalim, 2015). Consequently, the national school meal program played an important role in supporting organic farms and in more generally creating alternative food systems (Gook, 2012).

Recently, there has been a surge in interest regarding alternative food practices in Korea, these including urban agriculture, community supported agriculture, and the consumer cooperatives movement (Kim, 2012). The latter has become an important actor in alternative food systems in this country and is characterized by direct responses to consumer concerns, sharing of farming risks between producers and consumers, support for domestic family farms, promotion of organic agriculture, and reductions in distances from farm to fork (Jeong et al., 2011).

The principle of food sovereignty has become a cornerstone of this consumer cooperatives movement. These cooperatives have allowed consumers and farmers to organize and to network together, to promote organic farm products and farming practices, and to support social change movements (Kim, 2012). Although over 800,000 Korean households participate in consumer cooperatives, little is known about this movement outside the country, much less their roles in alleviating food-related-risks and in defending food sovereignty. Understanding the implications of consumer cooperatives movement for alternative food systems will help show how people adapt to food crises and determine their own regional food systems. Consequently, these results will help support and inspire actors in Korea and elsewhere who work for social change and who want to reshape food systems wherever they occur.

1.2. Scope of thesis

This thesis focuses on consumer cooperatives, which have become an essential component of alternative food provisioning practices in South Korea. These cooperatives are organized by and for consumers, embrace organic agriculture, simultaneously value food safety and food equity, and generally reject the global agri-food system. Although Korean consumer cooperatives have now existed for over 20 years, their more recent tremendous growth has been facilitated by wide-scale public concerns regarding food safety, a regional rural crisis in the country, and the liberalization of global agriculture.

Korean consumer cooperatives have since become a successful alternative food system for over 800,000 households; indeed, 4% of all households in the country

have joined consumer cooperatives. Members of consumer cooperatives also lead agri-food and social movements in Korea. They have actively participated in rallies against the importation of the US beef and radioactivity-contaminated foods and resist government policies that pursue neo-liberalization. Consumer cooperative movements also support organic agriculture and further facilitate the creation of many other alternatives to global agri-food system including free lunch programs across the country. Finally, many food system practitioners and activists have supported and in turn been supported by the business principles and strategies of consumer cooperatives.

During the course of this study, I recruited the interest and support of four major consumer cooperatives in Korea (i.e. Hansalim, iCoop, Dure and Happy-Center) as well as farmers who work with these cooperatives. As a comparison point and in order to better understand the values and experiences of conventional farmers, I worked with members of the Korea Peasant League, which is the largest producer organization in this country.

1.3. Thesis objectives

The overall aim of the thesis was to explore public perceptions of food in South Korea and to better understand the roles that consumer cooperatives, as one key element of the alternative agri-food system, play in coping with ongoing rural crisis in this country.

Specific objectives of this thesis, as represented in each empirical chapter are as follows:

1. To explore Korean public perceptions regarding globalization and food concerns, and more specifically:

● To characterize benefits and risks associated with the global agri-food system;

● To explore consumer perceptions of food safety and an ongoing rural crisis in Korea;

and

● To characterize motivations for, the positive and negative implication of, and consumer responses to the rallies surrounding the import of US beef in 2008.

2. To better understand the implications of low food self-sufficiency in Korea and more specially:

● To explore public perceptions of and possible responses to low food self-sufficiency in Korea; and

● To explore public perceptions of local food and local food systems

3. To explore farmer perceptions of and responses to food concerns and food systems, and more specially:

● To compare the attitudes of conventional and cooperative member farmers toward food concerns as they relate to food safety, food self-sufficiency, and a diversity of food systems;

● To explore influence of anti-BSE rallies on their farm management practices; and

● To examine farmers' perceptions of agricultural policies in Korea

4. To characterize the roles of alternative agri-food systems in addressing an ongoing food crisis and rural decline in Korea, and more specifically:

- To explore the benefits and risks incurred by consumers and farmers associated with consumer cooperatives; and
- To examine the current and potential roles of consumer cooperatives in addressing rural decline associated with the global agri-food system.

1.4. Structure of thesis

The thesis is structured as individual chapters that are self-contained and publishable manuscripts. I begin with this introduction (Chapter One) and a literature review the reflects academic work on globalization, agricultural commodity systems, social movement theory, alternative food systems, global organic agriculture, and the history and diversity of consumer cooperatives in Korea (Chapter Two). Subsequently, I examine public perceptions regarding the global agri-food system and the background and impacts of the public rallies against the import of US beef in 2008 (Chapter Three). I then explore the risk implication of low rates of food self-sufficiency in Korea and associated public responses and further characterize public perceptions of local food and local food systems (Chapter Four). Next, I compare perceptions and behaviors of conventional farmers and cooperative member farmers regarding food safety, food systems, and food policies (Chapter Five). I then explore the roles of consumers in addressing rural concerns in terms of food safety crisis, rural decline, and food inequity (Chapter Six). Finally, I present the conclusions and recommendations that emerge from this study, summarizing the major outcomes of

this thesis and suggesting future directions for redressing an inequitable and unjust agri-food system in Korea and, in turn, propose the roles that public might play in increasing food equity and sovereignty in this country and globally (Chapter 7).

References

Akenji, L. (2014). Consumer scapegoatism and limits to green consumerism. *Journal of Cleaner Production*, 63(1), 13-23.

Altieri, M. (2009), Agroecology, small farm, and food sovereignty. *Monthly review*, 61(3), 102-131.

Anderson, K. (2011). Globalization's effects on world agricultural trade, 1960-2050. *Philosophical Transactions of the Royal Society B*, 365(1554), 3007-3021.

Bishop, T., Reinke, J. & Adams, T. (2011). Globalization: Trends and perspectives. *Journal of International Business Research*, 10(1), 117-130.

Burch, D. & Lawrence, G. (2009). Towards a third food regime: Behind the transformation. *Agriculture and Human Values,* 26(3), 267-279.

Campos, M., Velázquez, A. & McCall, M. (2014). Adaptation strategies to climate variability: A case study of small-scale farmers in rural Mexico. *Land Use Policy*, 38, 533-540.

Challies, E. R. T. (2008). Commodity chains, rural development and the global agri-food system. *Geography Compass,* 2(2), 375-394.

Choi, J. & Kim, Y. (2011). *Environment friendly food encyclopedia*. Seoul: Damso Publishing. [In Korean]

Christian, T. & Rashad, I. (2009).Trends in U.S. food prices, 1950-2007.*Economics and Human Biology*, 7(1), 113-120.

Desmarais, A. & Wittman, H. (2014). Farmers, foodies, and First Nations: Getting to food sovereignty in Canada. *The Journal of Peasant Studies*, 41(6), 1153-1173.

Feagan, R., Morris, D. & Krug, K. (2004). Niagara region farmers' markets: Local food systems and sustainability considerations. *Local Environment,* 9(3), 235-254.

Flora, C.B. & Bendini, M. (2007). Globalization and changing relation among market, state and civil society: A comparative analysis of Patagonia and Iowa. *International Journal of Sociology of Agriculture and Food,* 15(2), 1-21.

Friedland, W. H. (2010). New ways of working and organization: Alternative agrifood movements and agrifood researchers. *Rural Sociology*, 75(4), 601-627.

Friedland, W.H. (2004). Agrifood globalization and commodity systems. *International Journal of Sociology of Agriculture and Food,* 12, 5-16.

Giménez, E. & Shattuck, A. (2011). Food crisis, food regimes and food movements: Rumblings of reform or tides of transformation? *The Journal of Peasant Studies*, 38(1), 109-144.

Gook, S. (2012). Improvement plan of food supply for the school lunch program. *Focus on Agricultural Policy*, 24, 1-16. [In Korean]

Guthman, J., Morris, A. W. & Allen, P. (2006). Squaring farm security and food security in two types of alternative food institutions. *Rural Sociology,* 71(4), 662-684.

Guptil, A. & Wilkins, J. (2002). Buying into the food system: Trends in food retailing in the US and implications for local foods. *Agriculture and Human Values,* 19(1), 39-51.

Hansalim. (2015). *2014 Hansalim Annual Report*. Retrieved from http://www.hansalim.or.kr/?page_id=21031. [In Korean]

Hassanein, N. (2003). Practicing food democracy: A pragmatic politics of transformation. *Journal of Rural Studies*, 19(1), 77-86.

Headey, D. (2011). *Was the global food crisis really a crisis? Stimulations versus self-reporting*. Washington: International Food Policy Research Institute.

Headey, D. & Fan, S. (2010). *Reflections on the global food crisis: How did it happen? How has it hurt? And how can we prevent next one?* Washington: International Food Policy Research Institute.

Hendrickson, M. K., & Heffernan, W. D. (2002). Opening spaces through relocalization: Location potential resistance in the weaknesses of global food system. *Sociologia Ruralis*, 42(4), 347-369.

Hinrichs, C. (2003). The practice and politics of food system localization. *Journal of Rural Studies,* 19(1), 33-45.

Hwang, Y. (2013). *Food demand and supply*. Seoul: Korea Rural Economic Institute. [In Korean]

Izumi, B., Wright, W., & Hamm, M. (2010). Farm to school programs: Exploring the role of regionally-based food distributors in alternative agrifood networks. *Agriculture and Human Values*, 27(3), 335-350.

Jackson, A. & Mitchell, E. (2009). Food sovereignty: Time to choose sides. *Sounding*, 41, 100-106.

Jeong, M., Moon, H., Ji, S., Lee, H., & Nam, G. (2014). Implementation for two years of Korea-US FTA: The impact on and takes of agriculture. *Focus on Agricultural Policy*, 85, 1-21. [In Korean]

Jeong, E., Kim, D., & Kim, M. (2011). *The economic fruits and policy tasks of consumer cooperatives in Korea*. Seoul: Korea Rural Economic Institute. [In Korean]

Kim, G. (2012). *Revitalize! Cooperatives*. Pajoo: Dlyeok publishing. [In Korean]

Kim, W. (2010). Polanyi's double movement and neoliberalization in Korea and Japan. *Social Movement Studies: Journal of Social, Cultural and Political Protest,* 9(4), 373-392.

Konefal, J., Mascarenhas, M., & Hatanaka, M. (2005). Governance in the global agro-food system: Backlighting the role of transnational supermarket. *Agriculture and Human Values,* 22(3), 291-302.

La Via Campesina (2014). Our members. Retrieved from http://viacampesina.org/en/index.php/organisation-mainmenu-44/our-members-mainmenu-71

Lee, H. (2012). *Agriculture in Korea: Solution for hope*. Korean Farmer and Fisher Newspaper: Seoul. [In Korean]

Lee, S., Kim, S., & Wainwright, J. (2010). Mad cow militancy: Neoliberal hegemony and social resistance in South Korea. *Political Geography*, 29(7), 359-369.

Lehner, M. (2013). Alternative food systems and the citizen-consumer. *Journal of Agriculture, Food systems, and Community Development,* 3(4), 49-53.

Little, R., Maye, D. & Ilbery, B. (2010). Collective purchase: Moving local and organic foods beyond the niche market. *Environment and Planning A*, 42(8), 1797-1813.

McCalla, A. F. (2009). World food prices: Causes and consequences. *Canadian Journal of Agricultural Economics*, 57(1), 23-34.

Micheletti, M. & Stolle, D. (2007). Mobilizing consumers to take responsibility for global social justice. *Annals of the American Academy of Political and Social Science,* 611(1), 157-175.

Moon, H., Jeong, H., Kim, S., & Kim, Y. (2014). *Evaluation of agricultural implementation for 10 years of Korea-Chile. FTA*. Seoul: KREI. [In Korean]

Patel, R. (2009). What does food sovereignty look like? *Journal of Peasant Studies,* 36(3), 663-672.

Piesse, J. &Thirtle, C. (2010). Agricultural R& D, technology and productivity. *Philosophical Transaction of the Royal Society B*, 365(1554), 3035-3047.

Rainbolt, G., Onozaka, Y. & McFadden, D. (2012). Consumer motivations and buying behaviour: The case of the local food system movement. *Journal of Food Products Marketing,* 18(5), 385-396.

Rocha, C. & Lessa, I. (2009). Urbam governance for food security: The alternative food system in Belo Horizonte, Brazil. *International Planning Studies*, 14(4), 389-400.

Selfa, T. & Qazi, J. (2005). Place, taste, or face-to-face? Understanding producer-consumer networks in "local" food systems in Washington State. *Agriculture and Human Values,* 22(4), 451-464.

Seoul talk-talk. (2011). Seoul Mayor Se-Hun Oh, Resign immediately due to the result of referendum (2011.8.29). Retrieved from http://inews.seoul.go.kr/hsn/program/article/articleDetail.jsp?boardID=177262&category1=NC1&category2=NC1_7 . [In Korean]

Smith, M.D., Asche, F., Guttormsen, A.G., & Wiener, J.B. (2010). Genetically modified salmon and full impact assessment. *Science,* 330(6007), 1052-1053.

Torrez, F. (2011). La Via Campesina: Peasant-led agrarian reform and food sovereignty. *Development*, 54(1), 49-54.

CHAPTER 2

LITERATURE REVIEW

2.1. Globalization and the agricultural commodity system

Many studies have explored the implications of globalization over the last several decades, and generally, concurred that agricultural globalization was facilitated by capital accumulation and reflected the development of agricultural science and technology and the evolution of transportation and communication networks (Challies, 2008; Cavalcanti, 2004; Hendrickson & Heffernan, 2002; Moreira, 2004). Since the late 19 th century in Europe and the US, the emergence of agri-food business in the production sector has resulted in capitalistic development and agricultural productivity growth centered on scientific knowledge and technology (Challies, 2008; Moreira, 2004). Further, innovation of transportation and communication technology has accelerated the development of integrated global food systems and helped create global agricultural commodity markets (Anderson, 2011; Godfray et al., 2010; Moreira, 2004). Meanwhile, overproduction of foods and plummeting food prices has aggressively driven agri-food business in the EU and the US to seek markets elsewhere around the world (Anderson, 2011; Godfray et al., 2010). With the growth of global markets, the characteristics of agriculture transformed from large numbers of small-scale agri-food operations to smaller numbers of large scale agri-corporations. The creation of these ever-larger agri-corporations has been facilitated by the reduction of taxes and tariffs by nation states and in turn prompted deregulation (Konefal et al., 2005). Thus, agricultural globalization has been characterized by the increasing presence of transnational food corporations involved in all agro-food sectors from production to distribution (Bonanno, 2004; Burch & Lawrence, 2005; Flora & Bendin, 2007; Friedland, 2004; Hendrickson & Heffernan, 2002; Konefal et al., 2005).

While researchers generally describe the nature and outcome of globalization in agriculture, their studies predictably differ in content and approach. Some are interested in analyzing political economic aspects of globalization and others carry out more detailed case studies (Challies, 2008). Friedland (2004) and Challies (2008) insist that the degree and process of globalization differ not only by the kinds of agricultural products but also by the development of agri-food commodity systems (Challies, 2008; Friedland, 2004). Challies (2008) also criticizes political and economic approaches to globalization, which ignore the nature and foundation of the larger ecosystem, pay too much attention to institutional regulation and social structure, and show inadequate interest in consumption.

One of the positive implications of globalization was an ability to address large-scale food demands by consumers (Anderson, 2011). Other strengths of industrialized food systems include the huge amount of capital invested by the mass production of foods as commodities and the creation of opportunities for large firms to access extra profits (Hendrickson & Heffernan, 2002). In addition, some indicate that industrialized food systems find it difficult to manage small markets and niche markets that reflect sub-dominant and diverse consumer demands (Konefal et al., 2005). Further, they struggle to address widespread consumer concerns about food safety and any adverse social and environmental impacts of those food systems at multiple scales of organization (Hendrickson & Heffernan, 2002).

Transnational corporations (TNCs) tend to transform and rearrange natural resources including land and water, labour, and capital (Anderson, 2011; Godfray et al., 2010; Moreira, 2004). Typically, food commodity companies have tended to merge until monopolies or oligopolies emerge (Friedland, 2004). Capital is globalized

easily as TNCs with extremely concentrated wealth are emancipated from the national regulations that would otherwise control the amalgamation and growth of these companies (Friedland, 2004; Moreira, 2004). In addition, human labour is shifted where convenient and vulnerable as forms of outsourcing or the employment of foreign workers (Flora & Bendini, 2007). The TNCs also exploit land and water resources over the world, ideally with little to no regulatory restrictions as they seek to help produce agri-food commodities (Friedland, 2004).

The TNCs in the global food system are vertically arranged from production to consumption and take the form of farmers, local agri-food industry, transnational agri-food industry, and transnational supermarket chains (Burch & Lawrence, 2005; Challies, 2008; Flora & Bendini, 2007). Those TNCs have shaped globalization, which has resulted in wide-scale liberalization of trade and finance, deregulation, and privatization (Moreira, 2004). Meanwhile, agri-food business has reduced the risks of production and commodities controlling farm labour, production management, and marketing. They endeavour to concentrate capital and use innovation and labour to continuously increase their competitiveness (Moreira, 2004). Therefore, they are able to choose countries for food production, which offer the diverse incentives and, in the process, small farms are often merged or sold to agri-food corporations. Lastly, agriculture and farmers in developing countries serve the production base for foods sold in developed countries (Cavalcanti, 2004).

Many studies point out that the emergence of transnational supermarket corporations (TSCs) ultimately transformed the global agri food system (Burch & Lawrence, 2005; Hendricson & Heffefnan, 2002; Konefal et al., 2005; Moreira, 2004). International large retailers control the regional agri food sectors using financial

power that is able to control the quantity and variety of foods to be produced (Konefal et al., 2005). Over the past several decades, they have become the most powerful actors in a global agri-food system as they transform food supply systems from production driven systems to buyer-driven systems using their financial power and global distributional abilities (Bonanno, 2004; Burch & Lawrence, 2005). They increasingly contact consumers directly and identify consumer concerns about food safety, food quality, and environmental impacts of agriculture. Then, reflecting these consumer demands, large international retailers have created their own standards and quality of commodities (Konefal et al., 2005). Using these standards and quality requirements, TSCs are able to govern agri-food production systems as they determine the attributes of foods without undertaking any production (Cavalanti, 2004). In turn, they are able to transfer production risks and commodity risks to local production actors. The development of these retail sectors have resulted in increased competition among the small numbers of large farms and have, in turn, eliminate the presence of any smaller farms (Friedland, 2004).

The highly concentrated capital power of TSCs has allocated labour and resources and established consumer marketing strategies around the world (Moreira, 2004). Further, they are able to control foods price through competition among agri-food manufacturers and provide these foods at the same price around the world (Konefal et al., 2005). Recently, as consumer demands for diverse foods have increased, TSCs have created various food markets. Subsequently, niche and exotic foods markets have appeared for people with high incomes and high education world over while large scale of markets for meats and grains have simultaneously expanded (Cavalanti, 2004; Hendricson & Heffefnan, 2002). In the process, TSCs have

strategically relocated their operations as they maximize their profits and undermine agricultural policies of developing countries that normally would have promoted and worked towards food sovereignty (Konefal et al., 2005).

2.2. Social movement theory

The relevance of social movement theory for better understanding resistance to the global agri-food system has become has become increasingly apparent, in large part related to the global advent of *La Via Campesina* over the last decade. In so doing, it is important to evaluate the relative importance of three dominant social movement theories as they relate to social and political action: resource mobilization theory, political process theory, and new social movement theory.

From the 1970s, resource mobilization theory has represented the major sociological concept used to explain social movement processes and characteristics in North America (Buechler, 1995). It emphasizes that the most effective actors of collective action tend to possess relatively greater amount of resources, money, media access, political power, and workers, and, are thus better able to mobilize people and organizations to change public policy (Edelman, 2001). Indeed, social media is used as a major vehicle for mobilizing actions and other resources (Breuer et al., 2014; Zorn et al., 2013). According to Starr (2010), resource mobilization theory has been used to better understand social class conflicts or economic wellbeing movements, i.e. the labour movement. However, these theorists need to show how participants in movements deliver incremental power (Ryan, 2006). This theory assumes that people with weaknesses take advantage of political opportunities to challenge social power; however, in many events, participants are not disadvantaged as many activists come

from the educated and professional middle class (Ryan, 2006). This analytical frame, however, has been criticized as it fails to pay attention to social relationships that build networks and serve diverse social and political movements (Jenkins, 1983).

Some experts perceive that political process theory challenges these shortcomings of resource mobilization theory (Morris, 2000) whereas others argue that it is merely another strand of resource mobilization theory (Ryan, 2006). Political process theorists emphasize that social movements concur with informal networks, pre-existing structures of political opportunities, and formal organizations. Political opportunity structure refers to important dimensions of the political system for those achieving collective action (Morris, 2000). Accordingly, political opportunities for movements appear when political elites are segmented or when states decline. These further stress that the mobilization of external elite groups can lead to the success or failure of social movements because of the relatively weak social position of the challenging group (Morris, 2000). On the other hand critics claim that political opportunities, the core element of political process theory, remain an unclear concept (Bevington & Dixon, 2005). While political process theory assumes that people join collective action through informal networks, sociologists often argue that this assumption is unlikely to address many social movements (Klarman, 1991).

In contrast to resource mobilization theory, new social movement theory emerged in Europe, where many social movements regarding politics, culture, and ideology have emerged in ways that resist explanation by a resource mobilization frame (Edelman, 2001). Many new social movements act to highlight the importance of identity issues such as ethnicity, gender, and sexuality rather than focusing solely on economic issues. Some scholars insist that this approach only accounts for

collective actions that are non-political and non-Marxist class conflicts. The environmental movement, women's movement, gay rights movement, and peace movement have been examined using new social movement theory. There were debates around new social movement theory as experts questioned how the definition of 'new' differed from 'old (Buechler, 1995)'. Others raise the issues about class structure in social movements and argue that these new perspectives are much less political than the ones that preceded them (Buechler, 1995).

Some researchers have combined theories for their case studies such as political process model with political opportunities (Goodwin & Jasper, 1999). It seems that at least some historical movements have been better explained and understood by synthesizing paradigms (Ryan, 2006).

Edelman questions whether resource mobilization theory and new social movement theory, which have been rooted in North America and Europe, can be applied to collective actions in other countries that are under authoritarian political power and polarized economic structure, especially in the Global South (Edelman, 2001). Further, he and others question whether social movement theory is only able to show what is already known and thus has limited predictive power (Starr, 2010).

Regarding consumer movements and food movements, theorists examine the role that consumption or everyday life plays in social change. While some recognize that consumption has been able to promote the importance of sustainable production, arguments that consumer movements are collective in nature are less convincing (Starr, 2010). Meanwhile, others examine how politics influence the everyday lives of consumers and how simple activities such as food choice become politicized (Bundy

et al., 2013; Streng, 2013). Furthermore, they showed the process by which people gain incremental powers to advocate their position (Wekerle, 2004).

2.3. Alternative food systems

The trend towards a globalized and industrial agri-food system has provoked the creation of alternative food system movements that celebrate the importance of regional and local approaches to agriculture and food that include farmers markets, community supported agriculture, direct marketing, school lunch movements, consumer cooperatives movements, and local food movements (Feagan et al., 2004; Guptill & Wilkins, 2002; Guthman et al., 2006; Selfa & Qazi, 2005). These alternative food system movements show how diverse stakeholders can actively participate in and create various strategies and actions for food systems, thereby counteracting and resisting the dominant food system (Hassanein, 2003). These movements have been influenced by environmental movements that highlight the negative impacts of food production and distribution on the environment at multiple scales of organization (Feagan et al., 2004). Additionally, activism regarding declines in food safety and food security arising from the global agri-food system encourages grassroots communities to create and participate in regional sustainable food programs (Selfa & Qazi, 2005).

Many researchers conceptualize alternative food systems as environmentally sound and economically feasible (DeLind, 2010). Further, these systems consider the social relationships of all participants in their food systems; therefore, they are seen more democratic and decentralized (Feenstra, 2002). As the local food system is explained with respect to geographic space, Feenstra argues that "*local food systems*

are rooted in particular place, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices, and enhance social equity and democracy for all members of the community" (Feenstra, 1997, p28). Researchers insist that the strength of these local food systems reflects the positive social relationships that emerge from a sense of place (Selfa & Qazi, 2005). Yet, some criticize these approaches as "defensive localism" and thus as insular and even xenophobic, instead emphasizing the role of diverse stakeholder participation in regional food systems (Winter, 2003).

Some approaches refer to these systems as civic agriculture or sustainable agriculture (DeLind, 2002; Feagan & Henderson, 2009: Lyson, 2005) whereas others emphasize more politicized approaches such as food democracy, food citizenship, right based food systems, and food sovereignty (Anderson, 2008; Desmarais, 2008; Hassanein, 2003). Civic agriculture generally refers to a locally based food production system consisting of local farmers or local agri-food firms that contribute to food production for local consumers and the development of local community but not the production of export foods (DeLind, 2002; Lyson, 2005). In turn, food democracy was derived from the concept that people have the right or power to decide agricultural policies and to shape food system (Hassanein, 2003).

Internationally, consumers and farmers promote the importance of food sovereignty, often defined as '*the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural system'* (Nyéléni Declaration on Food Sovereignty, 2007). The paradigm of food sovereignty was first introduced by *La Via Campesina* at the World Food Summit in 1996, which claimed that food sovereignty

is the precondition of authentic food security (Patel, 2009; Wittman, 2009). In 2002, Peoples Food Sovereignty Network defined food sovereignty as:

> *Food sovereignty is the right of peoples to define their own food and agriculture; to protect and regulate domestic agricultural production and trade in order to achieve sustainable development objectives; to determine the extent to which they want to be self-reliant; to restrict the dumping of products in their markets; and to provide local fisheries-based communities the priority in managing the use of and the rights to aquatic resources. Food sovereignty does not negate trade, but rather, it promotes the formulation of trade policies and practices that serve the rights of people to safe, health, and ecologically sustainable production. (Peoples Food Sovereignty Network, 2002)*

La Via Campesina was initiated by peasant and Indigenous organizations from four continents Asia, Europe, North America, and Latin America (Altieri, 2009; Holt-Giménez, 2009). *La Via Campesina*, Food First Information and Action Network have launched the Global Campaign for Agrarian Reform (GCAR) that work for agricultural land-related issues and that work to provide knowledge and experience to local and national organizations around the world as they relate to social conflict surrounding agrarian reform (Borras, 2008; Holt-Giménez, 2009). They insist that agrarian reform needs to focus on redistribution of farmland and protection of territory. The principles of land distribution refer to land possessed by the people who work and live on the land with their families and communities. Further, actors of the food sovereignty movement advocate the banning of land speculation and land grabbing by corporations (Torrez, 2009).

Yet, Patel (2009) argues that the relatively recent definition of food sovereignty as declared at the Forum for Food Sovereignty, Nyéléni 2007 appears to be contradictory and perhaps too inclusive. Thus, the declaration by *La Via Campesina* included the phrase 'it puts those who produce, distribute and consume food at the heart of food systems', implying that every individual and organization including transnational corporations has the right to define and shape the food system (Patel, 2009). It is inevitable that these types of ambiguities and contradictions will be worked out over the next short while.

Many researchers emphasize the importance of various case studies of community food projects, of community shared agriculture (CSA) and the investigation of the roles that governments played in farmers' market initiatives. CSAs work to build sustainable communities and to share farming risks and circumstances with consumers, which in turn allows farmers to apply environmentally sound and ecological agronomic practices and to better communicate farming risks with consumers (Chen, 2013; Hayden & Buck, 2012). Farmers also initiate CSAs to reduce social distance between consumers and farmers. Feagan and Henderson (2009) found some difficulties with CSAs as consumers often show misunderstanding of CSAs and reluctantly provide volunteer labour to the CSA farms. Nevertheless, experts and activists argued that CSA practices show great possibilities of problem solving for global food systems and go a long way to reducing gaps between production and consumption (Feagan & Henderson, 2009).

Direct marketing has also arisen as one of the local food practices that shorten the geographic distance from production to consumption. Direct marketing typically supports localization and local sustainability by protecting farmland and ecological

diversity. In doing so, direct marketing practices enhanced regional economy and food security (Feagan et al., 2004). Farmers markets seem to be the most successful framework in direct marketing policies (Wittman et al., 2012). In the US, the number of farmers markets increased from 2863 in 2000 to 4093 in 2005. In 2005, total sales in farmers markets were over $1 billion and average annual growth rate was 2.5 percent in the US (Rayland & Tropp, 2006). Farmers Market Canada revealed that total farmers market sales in 2008 were C$ 1.03 billion and 28 million consumers shopped at farmers markets in 2008. This study estimated that the shoppers perceived fresh and seasonal products as the most important criteria and low price as the least important (Farmers Market Canada, 2009).

2.4. Organic agriculture around the globe

Organic agriculture continues to exhibit rapid global growth. In 2012, organic farming was conducted in164 countries. Organic agricultural land in the world increased from 11 million ha in 1999 to 37.5 million ha in 2012, which accounted for 0.87% of total agricultural land. The number of organic farmers was 1.9 million in 2012, increasing from 1.8 million in 2011 and 1.6 million in 2010. The global organic market size was US$ 63.8 billion in 2012, which increased from US$ 59.1 billion in 2010 and US$ 54.9 billion in 2009 (Fibl & IFOAM, 2014).

Many researchers have examined the attitudes and rationale of organic farmers and conventional farmers and compared with their farming resources, personal characteristics, and risk management (e.g. Buck et. al., 2001; Duran, 1997; Kings & Ilbery, 2010; Koesling et. al., 2004; Uematsu & Mishra, 2012). Although most of the literature has focused on consumer attitudes and behaviours in alternative food

systems, an increasing number also focus on farmers. Consumer interested in safe foods, the environment, and economic opportunities have been identified as the major motivations for farmers that have changed from conventional to organic production (Darnhofer et. al., 2005; Duran, 1997; Klonsky, 2000). Three farmer types based on their rationale: committed farmers, who have deep, ideology-based and long-lasting motivations; pragmatic farmers, who have converted their farm practices when warranted by anticipated financial benefits; and environmentally conscious farmers that include self-declared or uncertified organic farmers (Darnhofer et al., 2005). Kings & Ilbery (2010) examined the reasoning to engage organic farming in the Netherlands. Their results showed that 50% of respondents adopted organic farming for environmental concerns, 20% had adopted organic farming from the beginning, and 16% had chosen organic farming for economic benefits. Some research analyzing producer attitudes towards risks showed that conventional and organic farmers have identical perceptions of agricultural risks that are not desirable but predicted events. The differences were that organic farmers were more likely to accept any farming risks and to actively develop their own skills of risk managements by studying natural phenomena while conventional farmers tended to evade the risks and to rely on external solutions such as chemical resources (Buck et. al., 2001; Koesling et. al., 2004; Sutherland, 2013).

Vagneron and Roquigny (2011) investigated the distribution route and profit margins of stakeholders in trade systems associated with conventional, organic, and fair trade bananas along the vertically integrated supply chains in a global context, which placed in order from the bottom to the top, include; farmers, farmer organisations, export corporations, import corporations, and transnational large

retailers. The research showed that the highest levels in value chains, transnational large retailers and agricultural corporations, decided product quantity and quality and commercial contracts with production participants and controlled global provisioning chains. Large retailers generally took a larger portion of total profit margin than other farmers, regardless of their location in conventional and alternatives food chains (Vagneron & Roquigny, 2011). Accordingly, the hierarchically organized global industrial agri-food system transferred production risks and commodity risks to local production actors. In turn, the development of retail sectors and intensified competition has resulted in the conversion of agriculture from competition among a large number of small-scale farms to those of a small numbers of large-scale farms (Friedland, 2004). In contrast to the global agri-industrial food system, small-scale organic farmers have sought for and/or created alternative food systems such as farmers' markets, cooperatives, school lunch programs, community supported agriculture, and direct markets that help mitigate these risks in other ways that tend to be more farmer-centric (Anderson, 2011; Guptill, 2009; Izmi et. al., 2010 a, b; Raynolds, 2004).

There have long been debates about the conventionalisation of organic agriculture in both academic and public spheres, as the organic agricultural sector has shown a transition of scale and agronomic practices due to the tremendous increase in consumer demand regarding safe and healthy foods (Goldberger, 2011). Some argue that anti-GMO movements and sustainable agriculture movements instigated these demands and provided the circumstance for the conventionalisation of organic agriculture (Glenna & Jussaume, 2006; Goodman, 2000; Guthman, 2004). In turn, organic farmers were likely to expand their farm land area and to seek larger profits in

contrast to the often counter-culture roots of organics in the 1970s. The conventionalisation of organic farming is understood as resembling the processes that underlie input-intensive agriculture in terms of scale, input resources, and marketing strategies (Darnhofer et al., 2005; Guthman, 2004; Lokie & Halpin, 2005). Meanwhile, complicated and diverse discourse analyses have emerged regarding the motivations, characteristics, and politics of conventional organics (Best, 2008; Guptill, 2009; Guthman, 2004). Others depict a bifurcation of organic agriculture, as small-scale organic farmers seek direct or alternatives markets with relatively lower profit margins (Best, 2008) and as large-scale organic farmers join agricultural industrial corporations when marketing their export-oriented commodities (Guthman, 2004). Darnhofer et al. (2005) thus distinguish between the professionalization and conventionalization of organic farming. The former represents the change in scale and marketing strategies but not the principles and values of underlying farming. On the other hand, conventionalisation refers to changes in farming principles and organizations, which effectively abandons the essence of organic farming (Darnhofer et al., 2005).

Regarding marketing strategy and involvement by agribusiness corporations, some point out that there is still a place-based distinctiveness in conventionalised organic agriculture, which defies any control of the organic sector by agribusiness. Some exemplified organic farms in California in this regard; as there were never any small-scale family farms in California, conventionalisation is better understood as an evolution of organic farming (Guthman, 2004). Further, they argue that larger organic farmers proactively shifted their farming arrangement and/or sought for distribution enterprise before agricultural industrial corporations came to dominate organic

farming (Guthman, 2004). Although the organic sector also show this tendency to increase scale of farming in Australia, there is no explicit evidence that large-scale organic farmers are less likely to be concerned about the environment and soil degradation (Lockie & Halpin; 2005). Besides, while large-scale organic farmers generally adopt industrial production and distribution systems, some simultaneously feed into alternative distribution systems that better reflect their principles and belief system (Guptill, 2009).

This research on conventionalisation has focused on the transformation of material conditions in production. There has been relatively little study the relationships of all participants in foods system from production to consumption, power and capital flow within these distribution system, or the roles and responses of consumers in creating organic food commodity systems (Oelofse et al., 2010; Tovar et al., 2005. Indeed, there are two major trade flows in the organic trade sector; the one representing trade between north and north and other trade from south to north (Raynolds, 2004). On the other hand, there are two vertical governing systems in the international governing system; one northern-based certification system and the other one a transnational corporate distribution system (Daugbjerg & Botterill, 2012; Raynolds, 2004; Vagneron & Roquigny, 2011). Agricultural alternative systems, including organic and fair trade, reflect a high-value commodity niche as long as consumer demands are maintained or increased (Wit & Verhoog, 2007).

2.5. Emergence of consumer movements in Japan and Korea

2.5.1. Consumer movements in Japan

In the 1990s, the *chisan-chisho* movement prevailed in Japan (Kimura & Nishiyama, 2008). Meaning "locally produced, locally consumed" *chisan-chisho* reflects a slogan that promotes education and awareness for consumer and marketing strategies for farmers. National and local governments in Japan proactively adopted the principles of the *chisan-chisho* movement; subsequently, Japanese agricultural cooperatives organized many *chisan-chisho* practices. The *chisan-chisho* movement aimed to change consumer perceptions of local foods and incorporated farm visit events, cooking classes, dietary guidelines, and the dissemination of local food recipes (Kimura, 2011). Further, local governments and actors promoted local foods in school lunch programs, marketing campaigns for local foods at retail stores, and the production of local processed food (Kimura & Nishiyama, 2008; Kusakabe, 2013). Yet, Kimura and Nishiyama (2008) are critical of the *chisan-chisho* movement, arguing that the main actors were unlikely to pay attention to any underlying political and social facets such as environmental impacts of agriculture, agricultural liberalization, and government policies sacrificing agriculture for industrial development.

In Japan, the consumer cooperatives movement is one of the most important consumer oriented alternatives to the conventional market systems. These consumer cooperatives were launched by workers in 1920s to collective purchase foods and living items at low prices. They experienced a long recession period during the Second World War. Subsequently, in the 1960s, Japan achieved remarkable economic growth. Simultaneously, several food safety accidents occurred, and the public

demanded a reform of the regional food system (Saito, 2012). The Japanese consumer cooperatives were initiated to restore consumer confidence in the food system, to promote Japanese farmers, in large part through the organization of '*han*', which refer to the weekly meeting groups with at least five consumer members for the collective ordering of safe foods (Park, 2006). The roles of *han* are important for Japanese consumer cooperatives because the members meet regularly and discuss their concerns; besides, they participate in the many diverse activities of consumer cooperatives, including protecting environment and watching harmful food additives (Hiroshi, 1991; Saito, 2012).

2.5.2. Consumer movements in Korea

In South Korea (herein Korea), a *shintobuli* movement emerged that was similar to the *chisan-chisho* movement. The term, *shintobuli*, originated from Buddhism and is literally translated as "human body and his/her land are inseparable". Thus, it encouraged people to consume foods produced in their hometown. The *shintobuli* movement was initiated in 1989 by Korean Agricultural Cooperatives, a private organization that is substantially controlled by government (Hyun & Yim, 2009). Agricultural globalization and opening rice markets represented the primary concern of the *shintobuli* movement. Further, widespread consumer concerns over the safety of imported foods increased awareness of the importance of domestic foods and increased interest and participation in the movement. Korean Agricultural Cooperatives developed the *shintobuli* brand and launched over 500 *shintobuli* stores in urban areas across the country. Total sales of *shintobuli* store in 2008 were USD 60 million (Hyun & Yim, 2009). Some experts have criticized the *shintobuli* movement

as taking an emotional and rhetorical approach to food consumption, in that they simply advocated that "things from Korean soil are best for Korean people" regardless of how the food was produced (Pemberton, 1999). Korean Agricultural Cooperatives have also been criticized for their lack of effective communication with consumers, especially in light of their selling of imported foods in their 1,300-store retail chain, the 'Hanaro market' (Yoon, 2009).

2.6. Agriculture and consumer cooperatives in Japan and Korea

2.6.1. Agriculture and consumer cooperatives in Japan

As indicated above, the consumer cooperative movement in Korea was generally inspired by a similar and earlier movement in Japan.

Agriculture in Japan has continued to decline over the past half of century. The share of GDP of agriculture dropped from 9% to 1% (Jones & Kimura, 2013). The average size of farm was 2ha and the share of agricultural land was 12.4% in 2010 (Tsuri, 2011). The number of farmers in Japan has sharply declined from over 10 million in 1970 to less than 3 million in 2009; the number of farmers over 65 years of age is about 2 million and has not changed since 1970 (Tsuri, 2011). As farm-land area remains very small, farm income is now only 19% of the total farm household income (Godo & Takahashi, 2012). According to Godo & Takahashi (2012), small-scale farmers in Japan are strongly motivated to retain their farmland for political influence in their traditional communities and to benefit from agricultural support policies. Some Japanese experts criticize that these small-scale farms are inefficient and that these farmer behaviours impede conversion from small-scale to large-scale and high-input farming approaches (Godo & Takahashi, 2012; Yamashita, 2006).

They suggest that farm sizes > 15 ha are needed to use labour-saving technology. Japanese food self-sufficiency on a calorie basis has declined from 79% in 1960 to 39% in 2006 (Kako, 2009). According to a poll carried out by the Japanese Cabinet Office in 2006, 79.2% of participants represented that the current food self-sufficiency (40%) was too low. In 2010, the Japanese government established the goal of food self-sufficiency, which would exceed 45% in 2015 and 50% in 2020 on a calorie basis (Jones & Kimura, 2013; Kako, 2009). They also adopted the Income Compensation Program to promote rice farmers according to the acreages of rice land. This program compensates farmers if market prices drop below their production costs (Godo & Takahashi, 2012; Tsuri, 2011).

Japanese consumer cooperatives are the most influential consumer movement organizations in Japan (Japanese Consumer's Co-operative Union, 2014; Riethmuller, 1994). The primary purpose of Japanese consumer cooperatives is to provide member consumers with safe and natural foods (Riethmuller, 1994). They have since expanded their businesses to include mutual aid, daycare, and elder caring in order to promoting the welfare of their members (Jeong et al., 2011). There are 584 consumer cooperatives and 27 million Japanese participate in them. The business turnover of Japanese consumer cooperatives was US$ 27.4 billion and accounted for 2.64% of retail distribution in 2013 ((Japanese Consumer's Co-operative Union, 2014, 2014).

The largest consumer cooperatives alliance, Japanese Consumer Cooperatives Union (JCCU) was organized in 1951 and represents all consumer cooperatives in Japan. The JCCU had 334 member consumer cooperatives and total business turnover was over US$ 3.2 billion in 2013.

Figure 2.1: F co-op store in Fukuoka, Japan (Photo credit: Soon-won Hwang)

Figure 2.2: Meat shelves in F co-op store in Japan (Photo credit: Soon-won Hwang)

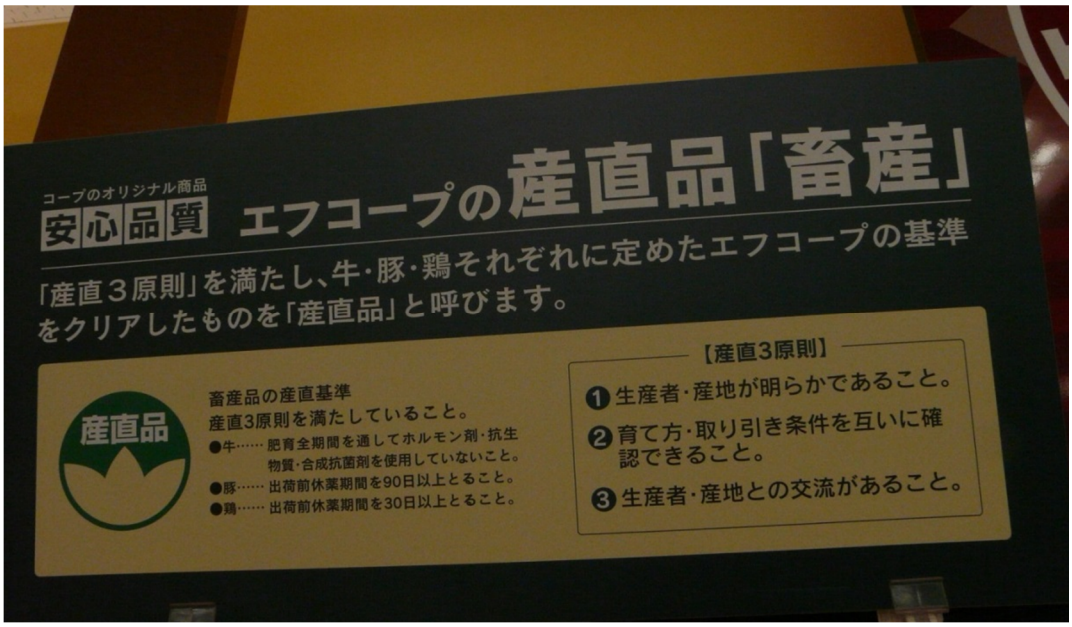

Figure 2.3: Advertisement on meat products of ‘direct delivery from the farms’ in F co-op in Japan (Photo credit: Soon-won Hwang)
The three principles of products of ‘direct delivery from the farms’ are:
1) the producers and produced places are clarified; 2) consumers can inspect the raising methods and condition for livestock; and 3) consumers visit rural and communicate with producers.

2.6.2. Agriculture and consumer cooperatives in Korea

It is widely accepted that the first cooperative store in Korea was established in Pulmoo School in Hongseong town, Chungcheong province in 1958 (Jeong et al., 2011). It is thus the oldest Korean cooperative in existence, and continues today as the Pulmoo Cooperative. Before that, many voluntary cooperatives had been launched in rural areas, which provided local inhabitants with goods at low prices (Kim et al., 2007; Yeom, 2007). In 1971, Catholic priests and social activists launched the Cooperatives Training Institute in Wonjoo, Gangwon province, which educated the public about the importance of cooperative movements. As a result, many credit cooperatives and consumer cooperatives were built in rural and mining towns across

Gangwon province (Kim, 2010; Yeom, 2007). However, those conventional consumer cooperatives ultimately disappeared as rural population decreased and the mining industry declined (Yeom, 2007).

Many identify that the beginning of current consumer cooperatives in Korea was 'Hansalim farm products', which organic farmers and social activists jointly opened in order to direct market for organic farm products in Seoul in December 1986 (Jeong, 2006; Jo, 2010; Pack, 2003). Current consumer cooperatives are characterized by the direct marketing of organic farm products and environmentally friendly household products in urban areas (Jo, 2010). Indeed, to distinguish consumer cooperatives from conventional and western approaches, the Korean public has named these organizations as 'consumer living cooperatives' (*sobija-saenghyeop*). The term 'consumer living cooperatives' was first used by Japanese consumer cooperatives, and reflected the importance of cooperation in broader living (Kim et al., 2007). Unlike previous cooperatives, the goal of Korean consumer cooperatives is to collectively purchase organic foods.

In Korea, the introduction of current consumer cooperatives reflected public concerns over food safety, especially as related to imported foods and the intensive use of chemical inputs in the agri-food industry. Domestic organic agriculture had been undermined by the ever-increasing use of chemical pesticides and fertilizers prompted by the Green Revolution in the 1970s (Jeong, 2006; Kim et al., 2007). The explosive growth of consumer cooperatives occurred after the political democratization in Korean society as many activists shifted their attention from anti-dictatorship activities to economic justice, social welfare, and environmental issues. They showed their interest in and support for regional community based movements

and were linked with a parallel growth in and relationships with Japanese consumer cooperatives over this time period (Kim et al., 2007; Yeom, 2007; Yu, & Kim, 2002).

2.6.3. Diversity of food-related consumer cooperatives in Korea

In 1988, Hansalim Cooperatives was founded by organic farmers and social activists who opened 'Hansalim Farm Products' as a direct market for organic farm products in December 1986 (Pack, 2003). Initially, organic farmers led the operations and most activities of the Hansalim Cooperatives, and educated consumers about food safety and agricultural issues (Jeong, 2006). Unlike the other cooperatives, both consumers and farmers were eligible for the membership in the Hansalim Cooperatives. They created and advocated the principle of, 'life-ism' (Korean term, *Saengmyeong-juui*), which referred to the respect for all living things in the universe. Their marketing slogan was 'consumers are responsible for farmers' lives and farmers are responsible for consumers' lives' (Jo, 2010; Kim, 2010). In the beginning, Hansalim organized the consumer group system whereby consumers ordered farm products together, and then, Hansalim delivered the products to any one member's location. This group-ordering system facilitated communication and collaboration among consumers. However, consumers using group-ordering systems declined as women increasingly entered the workforce. In contrast, consumers currently prefer the convenience of shopping at co-op stores (Park, 2003). By 2014, Hansalim had 480,500 consumer household members and over 2,100 producer members across the country. By this time, over 180 co-op stores had opened and net annual sales had reached US$ 326 million (Table 2.1).

Meanwhile, many other consumer cooperatives with few memberships were established in urban areas. While most eventually were dissolved due to management and financial difficulties, six relatively financially stable consumer cooperatives jointly founded the Dure Consumer Cooperatives Alliance (Dure[1]) in July 1997, which in turn provides support for affiliated consumer cooperatives. Dure focused their management and distribution systems on organic farm products (Kim et al., 2007; Yeom, 2007). The affiliated consumer cooperatives of the Dure opened their street stores and offered their members education, information about foods, and various programs that would facilitate community improvement. The Dure Producer Association was established in 2005. As of 2014, 30 affiliated consumer cooperatives have become members of Dure Consumer Cooperatives Alliance (Table 2.1).

Consumer cooperatives that had not been able to join to Dure Consumer Cooperatives Alliance due to their financial difficulties, jointly founded the iCoop cooperative in March 1998, which took responsibility for product development and management, distribution, and food processing. The iCoop developed an online ordering system as their business strategy. Individual cooperatives that are affiliated with the iCoop closed their stores and launched an online ordering system (Yu & Kim, 2002). In doing so, individual consumer cooperatives were able to reduce their operating costs and mitigate any financial difficulties. The iCoop also decided that their consumer members should pay mandatory monthly membership fees to help offset the costs of any distribution systems and staff' incomes. The iCoop continues to offer products at next-to-production cost for consumers (Yu & Kim, 2002). This approach is widely considered as a successful multi-win strategy, resulting in

[1] Dure was a voluntarily organized farmer group to share labour and work with cooperation in traditional rural communities in Korea.

improved finances for affiliated consumer cooperatives and lower costs for organic products for consumer members (Jeong, 2006). The monthly membership fee also encouraged consumers to purchase organic products provided by iCoop, in turn supporting organic farmers. The net sales of iCoop thus increased rapidly from USD 254.5 million in 2010 to USD 399 million in 2013 (Table 2.1) (iCoop, 2013). In 2006, iCoop established a Coop Store, Nature Dream, which operates and manages off-line store. By 2013, 194,856 consumer households and 2,673 farmers had become members, and they further operated 129 street stores (iCoop, 2014).

Happy-Center Cooperative was founded by Womenlink (Korean term, *Yeoseong-minwoo*), one of the main women's movement organizations in Korea. As described above, many regional social movement and environmental movement organizations have come to participate in and to support consumer cooperatives movements and to launch cooperative stores. While most joined the Dure Consumer Cooperatives Alliance or the iCoop, Womenlink initiated their own consumer cooperatives, Happy-Center Cooperatives, in 1989. Happy-Center Cooperatives reported that they have 22,972 members and had reached USD 15.4 million in net sales in 2012 (Table 2.1).

Table 2.1: Description of consumer cooperatives in Korea

	Hansalim[a]	Dure[b]	iCoop[c]	Happy-Centre[d]
Year of foundation	1988	1997	1998	1989
N of consumer member	480,000	85,000	194,856	22,972
N of producer member	2,100	700	2,673	NA
Net sales (USD,M)	326	93	399	15.4
Organization	180 stores	30 member consumer cooperatives	78 member consumer cooperatives	13 member consumer cooperatives
Mandate	Membership fee when joining	Membership fee when joining	Membership fee per month	Membership fee when joining
Investment	Mandatory payments when purchasing foods, which are paid back in withdrawal			

Source: [a] Hansalim, 2015; [b] 2014 Dure Cooperatives, 2014; [c] 2013 iCoop, 2013; [d] Happy-Centre, 2012

2.7. Conclusions

The literature regarding the implications of agricultural globalization; social movement theory and food and consumer movements, alternatives to the global agri-food system; trends regarding global organic agriculture, agriculture and consumer cooperatives in Japan, and the history and diversity of Korean consumer cooperatives was reviewed in this chapter. Many researchers have explored the alternatives that have arisen in response risks associated with the global agri-food system. More specifically, farmers' markets, CSAs, school lunch programs, and local food have arisen as important alternatives and responses to this global agri-food system in Korea and elsewhere in the world.

Although many practices and initiatives have been introduced as alternatives to global agri-food system in the literature, it is still unclear whether these alternatives

are really able to address ongoing rural crisis associated within globalization and neo-liberalization. Moreover, most alternatives appear to use few mobilizing resource (e.g. participants, funding, political power), so, there is still a question to what degree these alternatives fundamentally challenge neo-liberalized society and market. These shortcomings need to be addressed in order to alter the global agri-food system and to build equitable and just food systems in Korea and for society as a whole.

Figure 2.4: Hansalim store in Sejong-si (Photo credit: Soon-won Hwang)

Figure 2.5: Hansalim store in Gwacheon-si (Photo credit: Soon-won Hwang)

Figure 2.6: iCoop store ‘Nature-Dream’(*Jayeon-drim*) in Ilsan (Photo credit: Soon-won Hwang)

Figure 2.7: iCoop store in Ilsan (Photo credit: Soon-won Hwang)

References

Altieri, M. A. (2009). Agroecology, small farm, and food sovereignty. *Monthly Review*, 61(3), 102-113.

Anderson, K. (2011). Globalization's effects on world agricultural trade, 1960-2050. *Philosophical Transactions of the Royal Society B,* 365(1554), 3007-3021.

Anderson, M. D. (2008). Rights-based food systems and the goals of food systems reform. *Agriculture and Human Values*, 25(4), 593-608.

Bevington, D. & Dixon, C. (2005). Movement-relevant theory: Rethinking social movement scholarship and activism. *Social Movement Studies*, 4(3), 185-208.

Bonanno, A. (2004). Globalization, transnational corporations, the state and democracy. *International Journal of Sociology of Agriculture and Food,* 12, 37-48.

Borras, S. M. (2008). La Via Campesina and its global campaign for agrarian reform. Journal of Agrarian change, 8(2-3), 258-289.

Breuer, A., Landman, T. & Farquhar, D. (2014). Social media and protest mobilization: Evidence from the Tunisian revolution. *Democratization,* (Published online 2014).

Buechler, S. M. (1995). New social movement theories. *The Sociological Quarterly*, 36(3), 441-464

Bundy, D. A., Drake, L. J. & Burbano, C. (2013). School food, politics, and child health. *Public Health Nutrition*, 16(6), 1012-1019.

Burch, D. & Lawrence, G. (2005). Supermarket own brands, supply chains and the transformation of the agri-food system. *International Journal of Sociology of Agriculture and Food,* 13(1), 1-18.

Cavalcanti, J. S. B. (2004). New challenges for the players in global agriculture and food. *International Journal of Sociology of Agriculture and Food,* 12, 29-36.

Challies, E. R. T. (2008). Commodity chains, rural development and the global agri-food system. *Geography Compass,* 2(2), 375-394.

Chen, W. (2013). Perceived value of a community supported agriculture (CSA) working share: The construct and its dimensions. *Appetite,* 62(1), 37-49.

Darnhofer, I., Schneeberger, W. & Freyer, B. (2005). Converting or not converting to organic farming in Austria: Farmer types and their rationale. *Agriculture and Human Values*, 22(1), 39-52.

Daugbjerg, C. & Botterill, L. C. (2012). Ethical food standard schemes and global trade: Paralleling the WTO? *Policy and Society,* 31(4), 307-317.

DeLind, L. B. (2011). Are local food and the local food movement taking us where we want to go? Or are we hitching our wagons to the wrong stars? *Agriculture and Human Values.* 28(2), 273-283.

Desmarais, A. A. (2008). The power of peasants: Reflections on the meanings of La Via Campesina. *Journal of Rural Studies,* 24(2), 138-149.

Dure Cooperatives. (2014). *2014 annual report*. Seoul: Dure Cooperatives.

Edelman, M. (2001). Social movements: Changing paradigms and forms of politics. *Annual Reviews Anthropology,* 30(1), 285-317.

Farmers Market Canada. (2009). The National Farmers' Market Impact Study 2009 Report. Retrieved from http://www.farmersmarketscanada.ca/Upload/file/FMC%20FINAL%20Brochure%202009-ENG.pdf

Feagan, R. & Henderson, A. (2009). Devon acres CSA: Local struggles in a global food system. *Agriculture and Human Values*, 26(3), 203-217.

Feagan, R., Morris, D. & Krug, K. (2004). Niagara region farmers' markets: Local food systems and sustainability considerations. *Local Environment,* 9(3), 235-254.

Feenstra, G. (2002). Creating space for sustainable food system: Lessons from the field. *Agriculture and Human Values,* 19(1), 99-106.

Feenstra, G. (1997). Local food systems and sustainable communities. *American Journal of Alternative Agriculture*, 12(1), 28-36.

FiBL & IFOAM. (2014). *The world of organic agriculture: Statistics & emerging trends 2014.* Rheinbreitbach: FiBL & IFOAM.

Friedland, W. H. (2004). Agrifood globalization and commodity systems. *International Journal of Sociology of Agriculture and Food,* 12, 5-16.

Flora, C. B. & Bendini, M. (2007). Globalization and changing relation among market, state and civil society: A comparative analysis of Patagonia and Iowa. *International Journal of Sociology of Agriculture and Food,* 15(2), 1-21

Glenna, L. & Jussaume, R. (2006). Organic and conventional Washington State farmers' opinions on GM crops and marketing strategies. *Renewable Agriculture and Food Systems*, 22(2), 118-124.

Godo, Y. & Takahashi, D. (2012). *Evaluation of Japanese agricultural policy reforms under the WTO Agreement on Agriculture*. Paper presented at the International Association of Agricultural Economists Triennial Conference. http://purl.umn.edu/125102.

Goldberger, J. (2011). Conventionalization, civic engagement, and the sustainability of organic agriculture. *Journal of Rural Studies*, 27(3), 288-296.

Goodman, D. (2000). Organic and conventional agriculture: Materializing discourse and agro-ecological managerialism. *Agriculture and Human Values*, 17(3), 215-219.

Guptill, A. (2009). Exploring the conventionalization of organic dairy: Trends and counter-trends in upstate New York. *Agriculture and Human Values*, 26(1), 29-42.

Godfray, H. C. J, Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Nisbett, N., Pretty, J., Robinson, S., Toulmin, C., & Whiteley, R. (2010). The future of the global food system. *Philosophical Transactions of the Royal Society B,* 365(1554), 2769-2777.

Goodwin, J. & Jasper, J. M. (1999). Caught in a winding, snarling vine: The structural bias of political process theory. *Sociological Forum*, 14(1), 27-54.

Guptil, A. & Wilkins, J. (2002). Buying into the food system: Trends in food retailing in the US and implications for local foods. *Agriculture and Human Values,* 19(1), 39-51.

Guthman, J. (2004). The trouble with 'organic lite' in California: A rejoinder to the 'conventionalization' debate. *Sociologia Ruralis*, 44(3), 301-316.

Guthman, J., Morris, A. W. & Allen, P. (2006). Squaring farm security and food security in two types of alternative food institutions. *Rural Sociology,* 71(4), 662-684.

Hansalim. (2015). *2014 Hansalim Annual Report*. Retrieved from http://www.hansalim.or.kr/?page_id=21031. [In Korean]

Happy- Centre Cooperatives. (2012). *2012 Annual Report*. Seoul: Happy-Centre Cooperatives.

Hayden, J. & Buck, D. (2012). Doing community supported agriculture: Tactile space, affect and effects of membership. *Geoforum,* 43(2), 332-341.

Hassanein, N. (2003). Practicing food democracy: A pragmatic politics of transformation. *Journal of Rural Studies*, 19(1), 77-86.

Hendrickson, M. K., & Heffernan, W. D. (2002). Opening spaces through relocalization: Location potential resistance in the weaknesses of global food system. *Sociologia Ruralis*, 42(4), 347-369.

Hiroshi, I. (1991). Consumer cooperatives in the spotlight. *Japan Quarterly*, 38(4), 429-434.

Holt-Giménze, E. (2009). From food crisis to food sovereignty. *Monthly Review*, 61(3), 142-156.

Hyun, U. & Yim, H. (2009). Local agri-food system. *Sociology of food politics*. Seoul: Korea Agricultural Sociology.

iCoop. (2014). *2013 iCoop Korea Annual Report*. Retrieved from http://lemonhee.cafe24.com/2013_Eng.pdf [In Korean]

Japanese Consumers' Co-operative Union. (2014). 2013 Statistics of National Consumers' Co-operatives. Retrieved from http://jccu.coop/aboutus/coop/synthesis/

Jenkins, J. C. (1983). Resource mobilization theory and the study of social movements. *Annual Review of Sociology*, 9, 527-553.

Jeong, E. (2006). Characteristics of consumer cooperatives in South Korea. *Agricultural Economy*, 29(3), 1-18.

Jeong, E., Kim, D., & Kim, M. (2011). *The economic fruits and policy tasks of consumer cooperatives in Korea*. Seoul: KREI. [In Korean]

Jo, Y. (2010). *Current status and major issues of Consumer cooperatives movement*. Transitional consumer cooperatives movement. Seoul: Center for the Web of Life. [In Korean].

Jones, R. S. & Kimura, S. (2013). *Reforming agriculture and promoting Japan's integration in the world economy*. OECD Economics Department Working Papers, 1053. Retrieved from http://dx.doi.org/10.1787/5k4695710rf4-en.

Kako, T. (2009). *Sharp decline in the food self-sufficiency ratio in Japan and its future prospects.* Paper presented at the International Association of agricultural Economists 2009 Conference, http://purl.umn.edu/51570.

Kim, J., Kim, S. & Jeong, W. (2007). *Perception of the members of Consumer cooperatives*. Seoul: iCOOP Consumers' Cooperative Institute. [In Korean]

Kim, Y. (2010). *Life movement and consumer cooperative movement*. Seoul: iCOOP Consumers' Cooperative Institute. [In Korean]

Kimura, A. H. (2011). Nationalism, patriarchy, and moralism: The government-led food reform in contemporary Japan. *Food and Foodways: Explorations in the History and Culture of Human Nourishment*, 19(3), 201-227.

Kimura, A. H. & Nishiyama, M. (2008). The chisan-chisho movement: Japanese local food movement and its challenges. *Agriculture and Human Values*, 25(1), 49-64.

Klarman, M. J. (1991). The puzzling resistance to political process theory. *Virginia Law Review*, 77(4), 747-832.

Konefal, J., Mascarenhas, M., & Hatanaka, M. (2005). Governance in the global agro-food system: Backlighting the role of transnational supermarket. *Agriculture and Human Values,* 22(3), 291-302.

Kusakabe, E. (2013). Advancing sustainable development at the local level: The case of machizukuri in Japanese cities. *Progress in Planning*, 80, 1-66.

Lockie, S. & Halpin, D. (2005). The 'conventionalisation' thesis reconsidered: Structural and ideological transformation of Australian organic agriculture. *Sociologia Ruralis*, 45(4), 284-307.

Moreira, M. B. (2004). Agriculture and food on the globalization age. *International Journal of Sociology of Agriculture and Food,* 12, 17-28.

Morris, A. (2000). Reflections on social movement theory: Criticism and proposals. *Contemporary Sociology*, 29(3), 445-454.

Oelofse, M., Høgh-Jensen, H., Abreu, L. S., Almeida, G. F., Hui, Q. Y., Sultan, T., & Neergaard, A. (2010). Certified organic agriculture in china and Brazil_Market accessibility and outcomes following adoption. *Ecological Economics,* 69(9), 1785-1793.

Park, H. (2006). Issues and perspectives of consumer cooperatives in Japan. *Korean Society for Cooperative Study,* 23(2), 79-100. [In Korean]

Park, J. (2003). Unite production with consumption. Retrieved from http://www. mosim.or.kr. [In Korean]

Patel, R. (2009). Food sovereignty. *The Journal of Peasant Studies*, 36(3), 663-706.

Pemberton, R. W. (1999). Insects and other arthropods used as drugs in Korean traditional medicine. *Journal of Ethnophamecology*, 65(3), 207-216.

Rayland, E. & Tropp, D. (2006). National Farmers Market Manager Survey. USDA Agrucultural Marketing Service. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5077203&acct=wdmgeninfo

Raynolds, L. (2004). The globalization of organic agro-food networks. *World Development*, 32(5), 725-743.

Riethmuller, P. (1994). Consumer cooperatives: a neglected part of the Japanese distribution industry. *Review of Marketing and Agricultural Economics*, 62(3), 389-398.

Ryan, L. (2006). Rethinking Social Movement theories in the twenty-first century. *Sociology*, 40(1), 169-176.

Saito, Y. (2012). *Brief history for Japanese consumer cooperatives*. (H. Danaka, Trans.); Hongseoug: Geemulko. (2007). [In Korean]

Selfa, T. & Qazi, J. (2005). Place, taste, or face-to-face? Understanding producer-consumer networks in "local" food systems in Washington State. *Agriculture and Human Values,* 22(4), 451-464.

Starr, A. (2010). Local food: A social movement? *Cultural Studies-Critical Methodologies*, 10(6), 479-490.

Streng, M. (2013). The food riot revisited: New dimensions in the history of 'contentious food politics' in Germany before the First World War. *European Review of History*, 20(6), 1073-1091.

Torrez, F. (2011). La Via Campesina: Peasant-led agrarian reform and food sovereignty. *Development*, 54(1), 49-54.

ToVar, L. G., Martin, L., Cruz, M. A. G., & Mutersbaugh, T. (2005). Certified organic agriculture in Mexico: Market connections and certification practices in large and small farmers. *Journal of Rural Studies,* 21(4), 461-474.

Tsuri, M. (2011). Agricultural economic policy in Japan: supply and demand approaches of the food self-sufficiency rate. *Macro review*, 23(2), 63-81.

Vagneron, I. & Roquigny, S. (2011). Value distribution in conventional, organic and fair trade banana chains in the Dominican Republic. *Canadian Journal of Development Studies*, 32(3), 324-338.

Wekerle, G. R. (2004). Food justice movements: Policy, planning, and networks. *Journal of Planning Education and Research*, 23(4), 378-386.

Wit, J. D. & Verhoog, H. (2007). Organic values and the conventionalization of organic agriculture. *NJAS-Wageningen Journal of Life Sciences*, 54(4), 449-462.

Winter, M. (2003). Embeddedness, the new food economy and defensive localism. *Journal of Rural Studies*, 19(1), 23-32.

Wittman, H. (2009). Interview: Paul Nicholson, La Via Campesina. *The Journal of Peasant Studies,* 36(3), 676-682.

Wittman, H., Beckie, M. & Hergesheimer, C. (2012). Linking local food systems and the social economy? Future roles for farmers' markets in Alberta and British Columbia. *Rural Sociology*, 77(1), 36-61.

Yeom, C. (2007). The history and activity of ICOOP. Business and activity of ICOOP over 10 years (pp. 115-159). Seoul: ICOOP Consumers' Cooperative Institute.

Yoon, B. (2009). *Issues and strategies of local food movement*. In Sciology of food politics. Seoul: Korea Agricultural Sociology. [In Korean]

Yu, J. & Kim, J. (2002). A study of the implication and achieve of cooperative member's dues system: Case of Federation of Korean Cooperative. *Korea Cooperative Research*, 21(1), 131-175. [In Korean]

Zorn, T., Grant, S. & Henderson, A. (2013). Strengthening resource mobilization chains: Developing the social media competencies of community and voluntary organizations in New Zealand. *International Journal of Voluntary and Nonprofit Organizations*, 24(3), 666-687.

CHAPTER 3

PUBLIC PERCEPTIONS REGARDING GLOBALIZATION AND FOOD CONCERNS IN SOUTH KOREA

ABSTRACTS

Introduction: While the globally integrated agri-food system provides various benefits to Koreans such as a high abundance and diversity of foods at low prices, consumers have suffered from threats to food safety, chronic food price volatility, and even food shortage. The purpose of this chapter is to analyze Korean public perceptions of agricultural globalization and to identify any food-related concerns. Further, this chapter focuse on rallies against the import of beef from the US in 2008 and explored the rationale for these public responses.

Methods: Questionnaires were collected from 412 consumers and interviews conducted with 11 outsider stakeholders in 2009. .

Results: Conventional Korean consumers identified that freshness was the most important factor underlying food purchases followed, in declining order of importance, by safety, price, and nutrition value. They identified threats to food safety as the most important negative aspect of agricultural globalization, although it also was seen as contributing to a decline of domestic agriculture and rural communities as well as decline in food self-sufficiency within Korea. In total, 63.3% of conventional consumers in this study opposed to any declines in the national agri-food system that might result from industry -led economic growth. In 2008, over 500,000 people concerned about the import of US beef associated with bovine spongiform encephalopathy (BSE) took to the streets across Korea.

Conclusions: Participants in the rallies were, initially, most concerned about food safety, but, these rallies evolved into broader political conflicts regarding free-trade agreement with the US. In this respect, many interviewed experts characterized the rallies as a wide-scale Korean resistance to neo liberalization.

Keywords: Agricultural globalization, anti-US beef rallies, food price volatility, food safety, Korean consumers.

3.1. Introduction

Agricultural globalization has been facilitated by the over-production of agricultural products and low food prices that have lasted for several decades in the late 20th century. However, food safety, food security, and food price volatility have more recently become major concerns. Indeed, historical records such as FAO food price indices show that global food prices sustained their downward trend between the 1960s and 1990s, except for a short period of high prices in the 1970s (Christian & Rashad, 2009; McCalla, 2009; Piesse&Thirtle, 2010). Yet, since 2000, food prices have started to rise and shown high price volatility such as a spike boom of price from 2007 to 2008 and a downward decline from 2009 to 2010, when food prices were still higher than they were from to 2007 to 2008 (Back & Koo, 2010; Gilbert & Morgan, 2010; Stage et al., 2010). In 2011, food prices increased again (HLPE, 2011), these sustained until March 2014 (FAO, 2015). According to the FAO food price index, international food prices have been falling steadily since March 2014 (FAO, 2015).

Many have examined the causes of this price volatility and threats to food security since the 1970s (Back & Koo, 2010; Stage et al., 2010). In general, most studies argue that increase of oil prices, a weakened US dollar, unpredictable food demand (i.e. climate change), and speculation of international hedge funds have been the most important causes of this emerging global food crisis (Headey, 2011; HLPE, 2011). Other factors include escalating food demands due to global economic growth and international agricultural policies such as the declines of grain stocks, reductions in agricultural investment, and export bans by several major food exporting countries when confronted by food crisis (Gao, S., 2010; Gilbert & Morgan, 2010; Jayasuriya et al., 2013). High oil prices and increased use of agricultural products (i.e. corn and

sugarcane) for biofuel production have also contributed to increases in food prices (Allen &Wilson, 2008; Hojjat, 2009; McCalla, 2009). In the US, 7.5 % of corn harvested in nationwide in 2001 was used to produce corn-based ethanol, this increasing to 22.6% in 2007 (Headey & Fan, 2010). Meanwhile, shrinking agricultural investment and funds for agricultural research and development was one of the important factors leading to a global decline of food production (Headey, 2011; HLPE, 2011). Government expenditures on agriculture decreased from 11% of GDP in 1980 to 10% in 2002 in developing countries in Latin America and Africa while agricultural spending in developed countries was sustained at over 20% of GDP (Piesse & Thirtle, 2010). Additionally, experts suggest that growth of agricultural production and the impacts of the Green Revolution have plateaued due to limits of yield enhancement and excessive exploitation of natural resources (Godfray et al., 2010). Based on these insights, some predict that the global food crisis is actually a chronic phenomenon rather than a short-term shock (Headey & Fan, 2010).

Agricultural globalization promoted by the Doha Development Agenda of the World Trade Organization (WTO DDA) has been the center of much attention around the world, in part because it claimed to focus on market access and to address the trade problems for Least Developed Countries (Martin & Mattoo, 2010). Although negotiations regarding the Doha Agenda have proved largely stagnant over the last decade, some argue that agricultural market access has still improved under the WTO and that trade liberalization supported by the Doha will ultimately facilitates a balance between food demand and food supply (Andersen, 2004). Meanwhile, as the circumstances surrounding agriculture have been changing, some argue that the WTO DDA as initially conceptualized in 1986 was not the appropriate tool to address

ongoing food security problems and price volatility (Committee on World Food Security, 2011). Some international organizations, including World Bank and International Monetary Fund still argue that the objectives of the WTO negotiations on agriculture ultimately focus on increasing global market access for agricultural products exporting countries (Josling, 2003; Yamashita, 2006). Hence, in order to enhance food security in a global context, international trade negotiations need to consider the domestic agricultural sector associated with food security at the level of the nation (Committee on World Food Security, 2011).

Yet globalization still promotes the integration of national economies into a global system that ultimately excludes trade barriers and any fair competition for market access (Bishop et al., 2011; Hosseinzadeh, 2010; Josling, 2003). Some further insist that the benefits of agricultural globalization tend to divide international communities into rich and poor countries in terms of their progress of integration into the global economy. Even though the global community may experience food shortages, the level of food consumption in rich countries continues to increase unabated (Allen &Wilson, 2008; Committee on World Food Security, 2011; Gilbert & Morgan, 2010). Further, integrated international agriculture is easily fragmented by nations when severe food crises occur (HLPE, 2011). As food exporting countries begin to restrict food exports under these circumstances, food importing countries, in turn, experience food scarcity and high food prices. The FAO estimates that 925 million people were undernourished in 2010 (FAO, 2010). Meanwhile, Headey (2011) and Swinnen (2010) insist that researchers needed to better describe the circumstance that give rise to the vulnerability of social groups to food crises and to identify the mechanisms that place underdeveloped countries at risk to food price volatility.

Food safety is another concern that has grown with the globalization of agriculture. One such criticism is that food safety declines as the distance of food distribution between farmers and consumers increases (Buzby & Roberts, 2011). Since governance of global agriculture has shifted from farmers to international agri-food business in global food systems, difficulties in the traceability of foods and substantial increases in food mileage in agricultural commodity systems contributes to consumer' anxieties (Blake et al., 2010). Thus, some indicate that regulation and global trade negotiations in agriculture under the WTO are unlikely to mitigate food related risks. Indeed, the anti- BSE beef movement and associated mass protests that occurred in South Korea (herein Korea) in 2008 reflected public concerns associated with food safety and free trade negotiations between the US and Korea.

Recently, many researchers have attempted to better understand the social, cultural, political dimensions of food, in part because food has emerged as a particularly powerful motivation for social and political mobilization (Baker, 2004; Beghin et al., 2003; Levkoe, 2006). As countries maintain, and in some cases increase, their susceptibility to food insecurity, food price volatility, and food risk, these food issues are easily transformed into larger political struggles and riots (Amid, 2007; Gao, 2010). This is, indeed, the case for Korea.

Korea is characterized by a small land area, high population density, and very low rates of food self-sufficiency. There has been an increase in public concerns regarding food safety in the country (Choi & Kim, 2011). In 2008, rallies resisting the import of potentially BSE-infected beef from the US were held over a three-month period and > 500 000 people took to the streets (Kim, 2010; Lee et al., 2010). Yet, little is known about public perceptions and attitudes toward food issues and their

responses in alleviating food risks and defending food sovereignty which focuses on rights-based access to healthy and safe foods in Korea. Better understanding the public perceptions regarding globalization and food concerns will show how Koreans are already adapting and will continue to adapt to food crises and to shape their own food systems in the future.

This chapter examines benefits and risks associated with global agri-food system and consumer perception of food safety and ongoing rural crisis in Korea. Focusing on the anti-BSE rallies that occurred in Korea in 2008, this study will explore the implications of and consumer responses to these food-related rallies. This chapter also explored conventional consumer attitudes towards food and agri-food systems as they more generally represent public perceptions as a whole.

3.2. Methods

3.2.1. Study area

This study was conducted in Korea. The total GDP (Gross Domestic Product) of Korea was 832.5 billion USD and its population was 48.75 million in 2009 (The World Bank, 2011). Food self-sufficiency for grain including livestock feed continues to drop in Korea from 29.7% in 2000 to 22.9% in 2012 (Hwang, 2013). Korea imported 8.11 million tonnes of maize, 5.52 million tonnes of wheat, and 1.23 million tonnes of soybean in 2012 (Table 3.1). In 2010, the largest amount of agricultural products was imported from the US, followed in descending order, by China, Australia, and Brazil (Korea International Trade Association, 2011).

Table 3.1: Korean imports of maize, wheat, soybean, and rice in 2012 and associated changes in food self-sufficiency from 2001 to 2012.

Commodity	Quantity (tons)	Food self-sufficiency (%)	
	2012	2001	2012
Maize	8,112,000	0.8	0.9
Wheat	5,517,000	0.1	0.7
Soybean	1,232,000	7.7	9.5
Rice	681,000	>100	86.1

Source: Hwang, 2013

Agriculture and rural communities have both declined in Korea. The rural population declined from 3.93 million in 2001 to 3.12 million in 2009 while the proportion of rural residents over 65 yoa increased from 24.4% to 34.2% over this same period. The amount of farmland also declined, from 1.88 million ha to 1.74 million ha during this time. As a result, the contribution of agriculture in GDP dropped from 4% in 2001 to 2.4% in 2009 (Table 3.2).

Table 3.2: Agricultural statistics in Korea for 2001 and 2009

	2001	2009
Rural population(M)	3.9	3.1
% of total population	8.3	6.4
> 65 yoa of rural population (%)	24.4	34.2
Farmland (M ha)	1.9	1.7
% of GDP	4	2.4

Source: Statistics Korea, 2010

Diets of Koreans have also changed recently; consumption of rice and vegetables has declined sharply while that of meat and fruit has increased over the last 10 years (Table 3.3).

Table 3.3: Per capita food consumption (kg/person/year) in Korea in 2001 and 2009

	Rice	Wheat	Vegetable	Fruit	Meat	Milk
2001	92.8	34.4	164.4	41.9	38.2	51.4
2009	80.5	32.2	148.9	48.3	42.9	52.8

Source: Hwang, 2013

3.2.2. Data collection

This mixed-methods study design integrated both quantitative and qualitative data collection and analysis. It was approved by the Joint-Faculty Research Ethics Board at the University of Manitoba (J2009: 085).

Consumers were surveyed using a questionnaire composed of both Likert-scaled and open-ended questions. The seven-page questionnaire was constructed to document Korean attitudes towards food consumption, food production, food safety, food self-sufficiency, global and alternative food systems, local foods, government policies, and the roles of consumer cooperatives. The survey data for conventional consumers was collected from the capital city (i.e. Seoul) and from five provinces (i.e. Gyeonggi, Gangwon, Chungcheong, Jeolla, and Gyeongsang) (Figure 3.1). The data collection was conducted ensuring that a roughly-equal mix of ages and of males and females was sampled. In person interviews were carried out in train stations and parks and it took approximately 30 – 40 minute to complete. In total, 412 questionnaires were collected. In addition, semi-directed interviews were conducted with 11 Korean expert stakeholders from July to October 2009. Those survey respondents included representatives from five consumer cooperatives (i.e. Dure, Eco, Hansalim, Happy-Centre, and iCoop cooperatives), four civil society organizations (i.e. Korea Green Foundation, Environmental Friendly School Lunch Centre, Korean Womenlink, and Korean Women Peasant Association), one academic organization (Agricultural

Cooperatives College), and one government institute (Korea Rural Economic Institute). Each interview took 1 -2 hours to complete. Participants were asked about the positive and negative implications of the global food system, the BSE-associated rallies, local food systems, and the implications of the consumer cooperatives movement. The interviews were audio-recorded with participant permission, subsequently transcribed and then translated into English in their entirety.

Average age of the conventional consumers surveyed in this study was 39.2 closely resembling the state median age of 37.3 in 2009 (Statistics Korea, 2015). Average of family size in this study was 3.5, somewhat higher than the average national family size of 2.7 as surveyed by Statistics Korea in 2010. Statistics Korea (2015) reported that the proportion of households with four people was 22.5% in 2010, which was substantially lower than our proportion of 47.1% in this study.

Table 3.4: Socio-demographics of conventional consumers participated in this study (n=412)

Demographic	Proportion (%)	Mean (SE)	Demographic	Proportion (%)	Mean (SE)
Age			**Gender**		
15-30	27.4	39.2 (0.63)	Female	58.1	
31-45	38.2		Male	41.9	
46-60	30.0				
Over 60	4.5				
Financial situation			**Location**		
Not enough (1)	5.1	3.0 (0.05)	Seoul	37.7	
Tight (2)	19.8		Gyeonggi	24.1	
No extra money (3)	43.3		Gangwon	8.5	
Extra money (4)	29.9		Chungcheong	2.9	
Enough (5)	2.0		Jeolla	20.9	
			Gyeongsang	5.8	
Annual income			**Family size**		
Less than $7K (1)	7.0	3.6 (0.07)	1 person (1)	8.3	3.5 (0.06)
$7K - $14,999 (2)	10.4		2 people (2)	10.6	
$15K - $29,999 (3)	32.1		3 people (3)	17.9	
$30K - $44,999 (4)	23.1		4 people (4)	47.1	
$45K - $59,999 (5)	16.1		> 5 people (5)	16.1	
Over $60K (6)	11.4				
% Food Expenditure			**Interested in survey**		
Less than 10% (1)	9.0	3.0 (0.06)	Yes	26.5	
10 - 19% (2)	21.1		No	60.4	
20 - 29% (3)	35.9		missing	12.1	
30 - 39% (4)	24.3				
40 - 49%(50	6.1				
Over 50% (6)	3.7				
Education					
No high school (1)	4.8	4.1 (0.06)			
Some high school (2)	5.1				
High school (3)	24.6				
Collage (4)	12.4				
University (5)	47.2				
Post graduate (6)	5.8				

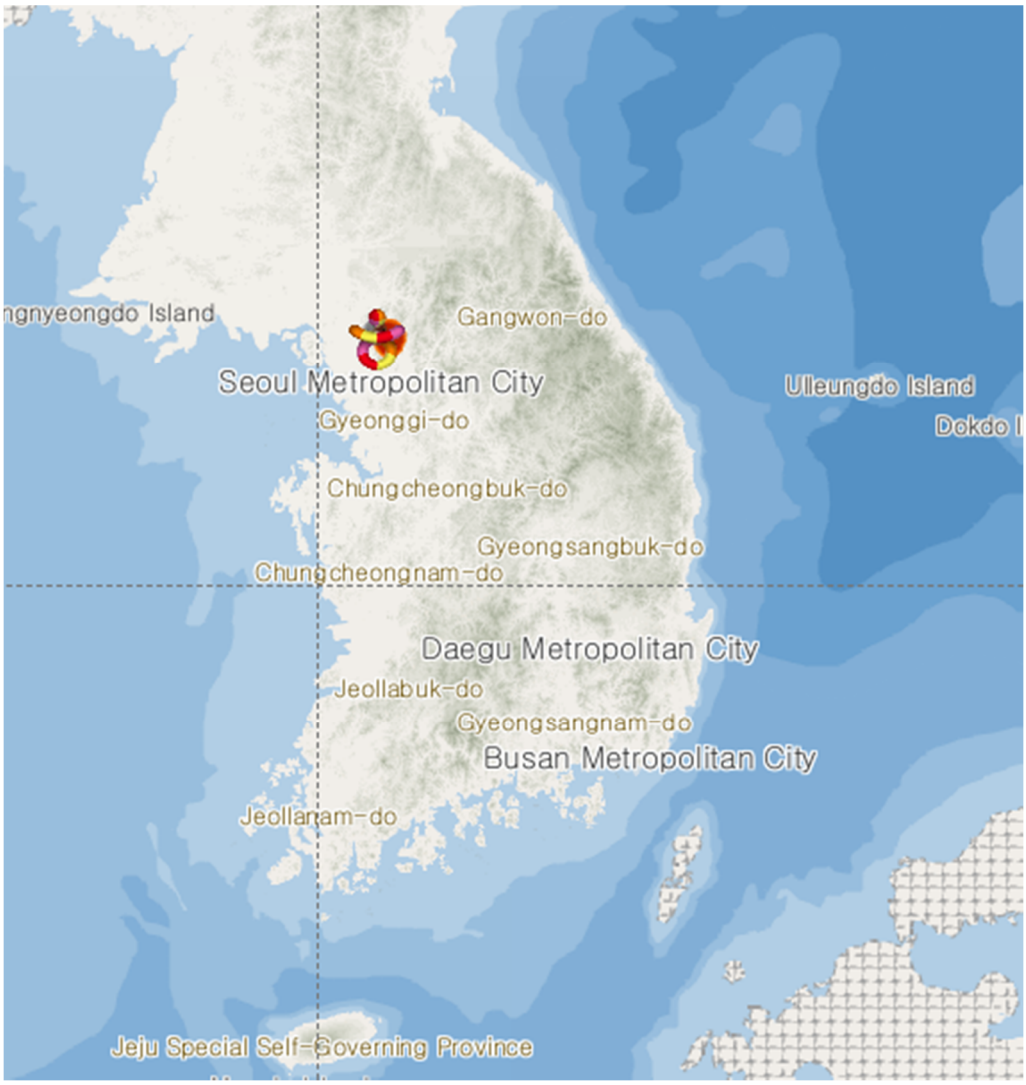

Figure 3.1: Map of South Korea showing provinces and larger urban centres
Source: Korea Tourism Organization (http://kto.visitkorea.or.kr/eng.kto)

3.2.3. Data analyses

Demographic data such as age, income, education level, financial situation, the number of family, proportion of food expenditure were recorded and are described as means, standard errors, and proportion (Table 3.4). Qualitative data in this study were documented during stakeholder interviews and from the four open-ended questions included in the questionnaire. Emerging themes from qualitative data were identified

and matched with any differences emerging from the Likert responses (Johnson et al., 2007).

Factor analysis (varimax rotation) was used to identify the factor structure underlying the quantitative data set (SAS V9.2). Any variables (i.e. responses to Likert scale questions) with at least 0.4 loading value were assigned to a factor. Chronbach alpha coefficients were calculated to test the reliability of the variables for each factor. All Chronbach alpha values were >0.6 and were considered satisfactory for internal consistency of a scale and thus seen as appropriate for variable reduction (Hatcher, 1994)

Logistic regression models were developed using Akaike Information Criteria (AIC) for parameter estimation instead of testing of null hypotheses (Burnham & Anderson, 2002). AIC logistic regression examined all possible models and individual models for multiple variables or square variables. For AIC model selection, factor scores of respondents arising from factor analysis were used, and a binary dataset was created using the lowest and highest 33% of respondents for binary logistic analysis. ΔAIC_c value<2 suggests substantial evidence for the model (Burnham and Anderson, 2002). Using the general literature on local food systems, nine independent variables were used in the AIC: age, membership, education, financial status, income, food expenditure, participation, and number of family members. The cumulative AICc weights were calculated for each independent variable by summing the AICc weights for all models containing that variable. Variables with the highest cumulative AICc weights have the greatest relative influence on respondent perceptions (Brook & McLachlan, 2006).

3.3. Results

3.3.1. Benefits of global food systems

Cheap price of foods

Since the 1970s, the Korean government has adopted policies focusing on economic growth based on industrial development, and Korean agriculture and the rate of food self-sufficiency have correspondingly decreased. When food self-sufficiency was low, the Korean government imported foods through the global agri-food system. Although food self-sufficiency of Korea has declined substantially over the last 40 years, from 49.2% in 1985 to 22.9% in 2009 (grain self-sufficiency) (Hwang, 2013), if food had not been imported over this time period, Korea could have experienced serious food shortages.

Survey respondents in this study tended to respond readily to the question about risks associated with global agri-food system; however, they generally agreed that its most important benefit was cheap prices for foods.

> *"The benefit of the global agri-food system is to access various foods with reasonable prices for consumers."*
>
> *(Eun-Mee Jeong: Korea Rural Economic Institute)*

Prices declined to the degree that even poor Korean consumers had ready access to food.

> *"The positive implication of global food systems is aid for the poor. If we have not imported foods, the rate of food self-sufficiency might be raised but food prices would increase."*
>
> *(Won-Gak Jung: iCoop)*

Results from the consumer surveys also showed that prices were important, albeit the third most important factor, behind freshness and safety. (Table 3.5) Cheap foods provided by the global agri-food system thus seem to play a key role in sustaining Korean household economies.

Table 3.5: Important factor of foods for conventional consumers (n=412)

Food factor	Mean[a] (SE)
Freshness	2.42 (0.09)
Safety	3.52 (0.11)
Price	4.32 (0.11)
Nutrition value	4.68 (0.11)
Organically grown	5.17 (0.14)
Taste	5.36 (0.12)
Produced locally	6.72 (0.12)
Appearance	7.07 (0.14)
Ease of preparation	7.71 (0.10)
Food producer	7.92 (0.12)

[a] Most important=1, least important= 10

Abundant foods in Korean market

One of the other identified benefits of global agri-food system was that a greater diversity of foods was abundant in markets, such that Korean consumers were able to enjoy exotic fruits and vegetable all year around.

> *"The positive thing for consumers is to experience plenty of foods through global food system."*
>
> *(Jae-sook Choi: Eco Cooperative)*

Indeed, many consumers did not realize that Korea has very low rate of food self-sufficiency. Even if people knew about this issue, they were not concerned because some of the staples were still produced locally.

> *"Consumers are unaware of low food self-sufficiency because lots of foods are in markets and we achieve self-sufficiency of rice that is staple food for Korean."*
>
> *(Geun-Haeng Lee: Hansalim)*

Moreover, the government would ostensibly be able to import any required foods should a food shortage occur.

Experience with various foods and cultures

Some stakeholders in this study thus indicated that globalization provided Korean consumers with foods produced around the world. Many tropical fruits and imported foods are sold in Korean markets and those foods have in turn influenced Korean food culture. Indeed, meat and coffee were not important traditional foods in Korea.

> *"Consumers think the global food system has given them an opportunity to experience many different kinds of foods. Some consumers prefer imported foods to domestic foods."*
>
> *(Mi-Hyeok Gwon: Korean Womenlink.)*

These changes in food preferences arguably have given Korean consumers insights into other cultures around the world.

> *"The positive implication of global agri-food systems is providing chances to consumers to experience cultural varieties. As foods represent culture of their countries, consumers can understand various cultures around the world by accessing foods distributed by the global food system."*

(Youn-Soon Kim: Happy-Centre Cooperative)

Development of agricultural mass-production technology

An interviewee also commented that one of the benefits of globalization for foods was the transfer of agricultural technology from developed countries to developing countries.

> *"Mass production technology arising from the global food system may help our agriculture."*
>
> *(Bin-Pa Lee: Seongbuk School Lunch Centre)*

3.3.2. Risks of global food system

Threatening food safety

The important negative aspects of globalization for foods were associated with threats to food safety. Stakeholders answered there were too many imported foods to safely manage.

> *"As we are importing huge amount of foods, it is difficult to protect food safety properly."*
>
> *(Bin-Pa Lee: Seongbuk School Lunch Centre)*

Moreover, the Korean public was skeptical about the government willingness and ability to mitigate any associated risks. Thus, 63% of consumers at least somewhat disagreed that 'imported foods are generally high in quality' whereas 60% of consumers responded negatively to the question 'the Korean government is adequately managing food safety'. (Table 3.6)

Table 3.6: Conventional consumer perceptions of food safety (n=412)

Question	Mean[a] (SE)	-/+ (%)[b]	N /DK (%)[c]
The Korean Government is adequately managing food safety.	2.99 (0.07)	62.2/12.0	24.8 /4.1
Imported foods are generally of high quality.	2.89 (0.06)	62.7 /10.4	23.4 /3.6
I check food labels to see where the product is produced.	5.06 (0.07)	14.1 /67.7	16.7 /1.5
Government should deal with issues of food safety separately from economic and political issues.	5.49 (0.08)	11.5 /77.7	8.0 /2.8

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N: Neutral, DK: Don't know

Under the global agri-food system, it is hard to track food origins and both production and processing when food safety becomes a concern. Therefore, consumers are unable to assess or respond to risks themselves, to designate any responsibility to food farmers, processors, and distributors or to be compensated for any damage.

> *"Consumers don't know who produces the foods and how the foods came to market. Therefore, when food safety problems occur, there are no solutions at all in the global food system."*
>
> *(Kyung-san Hwang Kim: Korean Women Peasant Association)*

Stakeholders indicated that since foods have been imported, consumers have played an increasingly important role in protecting food safety rather than being reliant on the government. Indeed, the stakeholder who works in a government institute advised that consumers had to assure food safety themselves.

> *"Korean consumers have concerned about the safety of imported foods since market opened in 1988. They have learned lots of information by themselves and were aware of pesticide and foods management issues and are concerned about the impacts of pesticides on human health."*
>
> *(Eun-Mee Jeong: KREI)*

The activists also remembered that civil groups had provided the public with information regarding food safety and organized related campaigns. In 1988, Korean government responded to a widespread public request and launched the Korea Foods and Drug Administration, but it seemed that most people were still dissatisfied about ability of this agency to protect public food safety.

> *"Consumer groups have continued to campaign and ask government to reinforce inspection. At last, the Korea Foods and Drug Administration was established in 1998, but the public is still not satisfied."*
>
> *(Yeol Choi: Korea Green Foundation)*

Devastating Korean agriculture and rural communities

Opening the Korean food market and the introduction of a globally integrated food distribution system in 1994 accelerated the decline of the Korean agricultural system.

> *"Forty years ago, 40% of Koreans were farmers, and now, only 7% are farmers. This 7% of Korean farmers cannot compete with large industrial farmers in agricultural developed countries."*
>
> *(Yeol Choi: Korea Green Foundation)*

At a minimum, a subset of culturally important foods should be identified and protected.

> *"The decline of rural communities is one of the emotional problems. So we have to protect rural areas. Even if we cannot protect agriculture as a whole, at least we have to protect rice and grain, vegetable, fruit and specialty products."*
>
> *(Geun-Haeng Lee: Hansalim)*

Cheap food prices provided by transnational foods corporations caused a rural crisis in Korea, which was characterized by rural depopulation and, in the absence of any new farmers, an increase in the age of farmers in these areas.

> *"It is becoming more difficult due to free trade agreement and the opening of food markets. Korean rural areas have faced depopulation and a high age of farmers."*
>
> *(Min-Sun Park: Agricultural Cooperative Collage)*

Further, it resulted in a further social and cultural decline in rural communities.

> *"As Korean ladies do not want to live in rural, male farmers cannot be getting married. Nowadays, 40-50% of brides in rural is foreigners."*
>
> *(Yeol Choi: Korea Green Foundation)*

Ultimately, 73.6% of conventional consumers in this study disagreed that 'farmers are now fairly compensated' whereas only 6% agreed (Table 3.7). This reflects the difficult, and some would say unfair, situation that farmers face. In total, 63.3% of consumers disapproved with government policies that promoted economic growth at the expense of the domestic agricultural system. Moreover, 81.4% of these consumers responded that domestic food price was unstable because of food imports from other countries (Table 3.7).

Table 3.7: Conventional consumer perceptions of agriculture (n=412)

Question	Mean[a] (SE)	-/+ (%)[b]	N/DK[c] (%)
Farmers are now fairly compensated.	2.48 (0.07)	73.6/6.0	15.8/4.5
It is inevitable that we sacrifice our own ability of farm when achieving economic growth in Korea	3.14 (0.08)	63.3/23.6	11.3/1.8
Unstable prices of imported foods strongly affect our food system.	5.58 (0.06)	4.5/81.4	9.8/4.3

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N: Neutral, DK: Don't know

Declines in food self-sufficiency

The trigger that prompted declines in food self-sufficiency was the introduction of government policies that supported industrial economic growth at the expense of domestic agriculture. In Korea, tremendous economic growth was achieved by poorly paid labour power. These low wages were, in turn, enabled by the low prices of foods imported through the global agri-food system with uncertain implications for food security. Indeed, Korea was removed from the lists of food-insecure countries after its industrialization and its economy developed in the 1980s. Nevertheless, food security in Korea has become a political issue because of ongoing military conflict between North and South Korea (Müller, 2013).

> *"When we have imported foods from the US, food self-sufficiency in Korea started to drop. The Korean government has adopted the policy of low price of agricultural products and has urged the exportation of industrial products. They import global foods and provide Korean people with those foods at low prices. In the process, we have faced a food security crisis."*
>
> *(Won-Gak Jung: iCoop)*

Under these circumstances, Korean rural areas declined in population and infrastructure and food self-sufficiency also plunged rapidly. After the WTO was established, government supports and trade barriers that had helped support rural populations were restricted around the world, and transnational foods industry came to dominate Korean foods market. In Korea, the Aggregate Measurement of Support (AMS)[2] by WTO negotiations was USD 2.2 billion and has since declined by USD 71.3 million per year. Thus, AMS reached USD 1.4 billion in 2004, a level of support that has since been maintained (Lee, 2011).

Reduction of food variety

Some stakeholders worried that traditional foods and seeds in Korea have started to disappear in the face of the global food system.

> *"A negative result of the global food system is a decrease in traditional ecological varieties."*
>
> *(Bin- Pa Lee: Seongbuk School Lunch Centre)*

This in turn has been accompanied by changes in Korean diets and westernization of the local food culture.

> *"Advanced countries export and standardize foods around the world; consequently, foods show less local diversity."*
>
> *(Youn-Soon Kim: Happy-Centre Cooperatives)*

3.3.3. Factors associated with consumer food concerns

Factor analysis was used to better explain and understand conventional consumer attitudes towards risks associated food systems and food concerns. Three

[2] The AMS, defined in the WTO Agreement on Agriculture, includes both budgetary outlays as well as revenue transfers from consumers to producers as a result of policies that distort market price.

factors were extracted; the first factor reflected consumer attitudes towards food safety and policies, the second reflected consumer attitudes towards direct marketing, and the third reflected attitudes towards food citizenship. Food citizenship in this context refers to the notion that individuals have rights to food but also bear responsibility for the social and environmental impacts associated with their individual and collective food choice (Warner et al., 2014; Wilkins, 2005). The proportion of variance explained by each of the three factors was 16.9%, 10.0%, and 5.9%, respectively. Cronbach coefficient alpha value was acceptable at 0.79 for factor one, 0.69 for factor two, and 0.63 for factor three, indicating a reliable homogeneity within each factor (Table 3.8). The factor scores for factor one ranged from -2.44 to 2.37 and those of factor two and factor three ranged from -4.61 to 2.60 and from 3.15 to 2.47 respectively.

In total, 62.2% of conventional consumers disagreed that the Korean government is adequately managing food safety. Meanwhile, they showed largely neutral attitude towards the safety of food provided by large retailers as only 48.3% doubted the food safety provided by large retailers. But only 18.4% felt positive about these retailers, which seems even lower (Table 3.8)

Most conventional consumers supported direct marketing, and 86.5% agreed that there are too many “middlemen” between farmers and consumers in Korea. Accordingly, most (90.2%) thought that the government should promote direct marketing as excessive profits of these middlemen threaten small-scale farms and farmers.

In general, most (70.4%) conventional consumers supported civil movement organizations that are building alternative food systems in Korea and many (61.4%)

felt it was important to support farmers in the “Third World” (Table 3.8). Meanwhile, their role in affecting discourse surrounding food seemed to be somewhat pessimistic. Less than half (42.1%) actively expressed their opinion about government food policies and only half (50.9%) agreed that they might have control over the way food is produced through their purchase power as consumers (Table 3.8).

Table 3.8: Factor analysis for conventional consumer perceptions

Factor analysis	Factor loading			Conventional consumer		
	Fa. 1	Fa. 2	Fa. 3	Mean(SE)[a]	-/+ [b](%)	N/ DK[c] (%)
Factor 1: Food safety concern and policies (Eigen value: 6.24, Cronbach coefficient alpha: 0.79)						
I trust the safety of food provided by large retailers.	0.76			3.36(0.07)	48.3/18.4	33.1/0.7
The Korean government is adequately managing food safety.	0.72			2.99(0.07)	62.2/12.0	24.8/4.1
Farmers are now fairly compensated	0.62			2.48(0.07)	77.2/6.1	16.6/4.9
Current food policies adequately reflect consumer concerns in Korea.	0.55			3.32(0.07)	51.0/20.1	27.7/4.1
Factor 2:Direct marketing (Eigen value: 3.70, Cronbach coefficient alpha: 0.69)						
There are too many middlemen between farm and fork in Korea.		0.77		5.77(0.06)	5.9/86.5	9.8/3.4
Government should promote direct market policies.		0.66		5.91(0.05)	1.7/90.2	8.3/2.4
Excessive profits of middlemen threaten small scale farms in Korea.		0.61		5.87(0.05)	0.8/89.2	10.1/3.4
Factor 3: Food citizenship (Eigen value: 2.18, Cronbach coefficient alpha: 0.63)						
By voting with their money, consumers have control over the way food is produced.			0.79	4.72(0.07)	12.0/50.9	23.8/13.4
I actively express my opinion about food policies.			0.73	3.64(0.07)	24.1/42.1	28.0/5.8
I support civil movement organizations in building alternative food systems.			0.61	5.23(0.06)	6.2/70.4	19.4/4.9
It is important to support farmers in the Third World through purchasing decisions			0.52	5.17(0.06)	4.8/61.4	21.7/11.7

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N: Neutral, DK: Don't know

Regression analysis was used to identify factors that might help explain consumer attitudes regarding food safety policies, direct marketing, and food citizenship. Nine independent variables (Table 3.9) were used to calculate Akaike's Information Criterion (AIC) of factor one (Table 3.11). Fourteen candidate models were calculated that would help explain consumer attitudes towards governmental food safety policies (Table 3.10). The best model resulting in a ΔAIC_c value of 0 included two independent variables: financial status and income. Three models (As ΔAIC_c value<2) suggest substantial evidence for the models for factor one.

Table 3.9: Explanatory variables in developing the candidate models to examine consumer attitudes towards food safety concerns and policies (factor one)

Abbreviation	Variable
Age	Age of respondent
Education	Highest level of education of respondent, which ranged from level 1(no high school) to level 5 (university degree)
Familysize	Size of family
Financialstatus	Financial situation of respondent, which ranged from level 1 (not enough financial resources) to level 5 (more than enough financial resources)
Foodexpenditure	Percentage of income spending for food in last month
Gender	Gender of respondent (male, female)
Income	Annual income of respondent, which income ranged from level 1 (less $ 6 999) to level 6 ($60 000 or more).
Location	Residential province of respondent
Participation	Respondent interest in survey

Table 3.10: Selected candidate models explaining consumer attitudes towards food safety concerns and policies (factor one)

Model	Log(L)	K	AIC_c	ΔAIC_c	AIC_{cw}
Financialstatus+Income	132.631	3	138.631	**0.0**	0.351
Income+Education	133.349	3	139.349	**0.7**	0.245
Financialstatus+Income+Education	132.168	4	140.168	**1.5**	0.136
Location+Income+Familysize+Education	131.298	5	141.298	2.7	0.093
Location+Income*Familysize+Education	133.268	5	143.268	4.6	0.035
Location+Financialstatus+Income+Familysize+ Education	131.298	6	143.298	4.7	0.034
Financialstatus+Income+Familysize+Foodexpenditure +Education	131.508	6	143.508	4.9	0.031
Gender+Location+Financialstatus+Income+Familysize +Education	130.807	7	144.807	6.2	0.016
Location+Financialstatus+Income+Familysize +Foodexpenditure+Education	131.264	7	145.264	6.6	0.013
Gender+Age+Location+financialstatus+Income+Famil ysize+Education	130.709	8	146.709	8.1	0.006
Gender+Location+Financialstatus+Income+Familysize +Foodexpenditure+Education	130.768	8	146.768	8.1	0.006
Location+Participation+Financialstatus+Income+Fami lysize+Foodexpenditure+Education	130.987	8	146.987	8.4	0.005
Age+Location+Participation+Financialstatus+Income +Familysize+Foodexpenditure+Education	130.987	9	148.987	10.4	0.002
Gender+Age+Location+Participation+Financialstatus+ Income+Familysize+Foodexpenditure+Education	130.245	10	150.245	11.6	0.001

The income of survey respondents was the most important demographic characteristic influencing consumer attitudes, followed in descending order of relative importance by financial status, education. In contrast, family size, age, participation, gender, and food expenditure variables had much less influence on consumer perceptions (Table 3.11).

Table 3.11: Cumulative Akaike (AICc) weight for nine independent variables that influence consumer perceptions regarding food safety and policies

Independent variable	Cumulative AICc weight[a]
Income	0.67
Financial status	0.35
Education	0.34
Location	0.29
Family size	0.28
Gender	0.27
Participation	0.26
Food expenditure	0.26
Age	0.25

[a] Cumulative Akaike weight is the percent of weight attributable to models containing that particular variable and is calculated by summing the AICc model weights of every model containing that variable.

Although conventional consumers perception of food safety policies were somewhat critical, their negative attitudes towards government food safety policies were much stronger at lower income levels, except respondents with income US$ 7,000 to 14,999 annual income (Figure 3.2). Financial status was the second most important demographic characteristic influencing consumer perceptions regarding food safety concerns and policies (Figure 3.3). Like income, respondents at lower financial status were more critical of government food policies except respondents at the lowest financial status (i.e. not enough financial resources to get by).

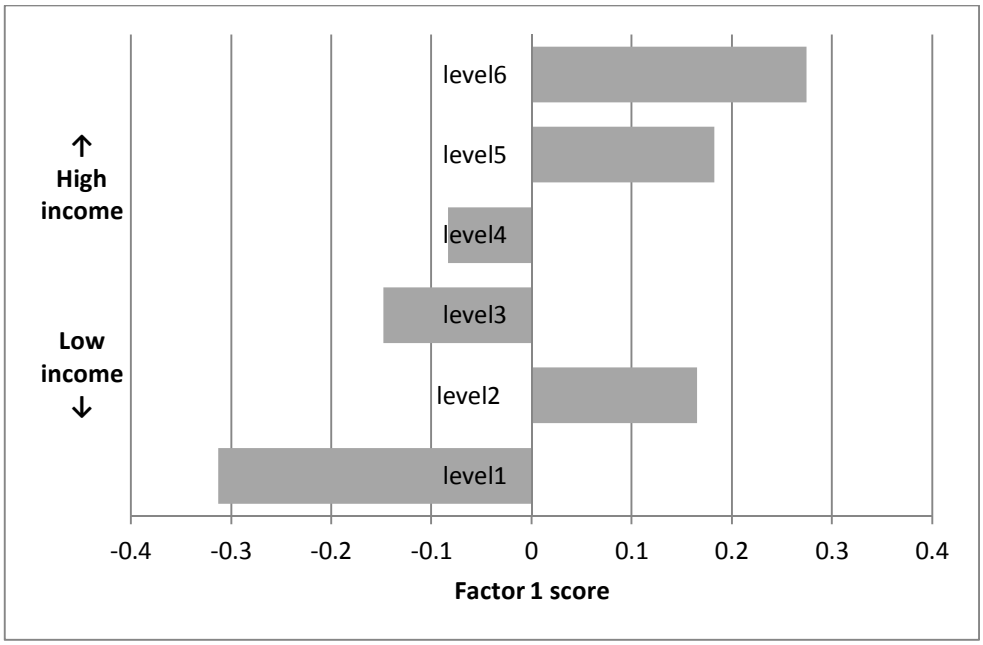

Figure 3.2: Mean of factor one score with annual income level for conventional consumers. Note: income ranged from level 1 (less $ 6 999) to level 6 ($60 000 or more).

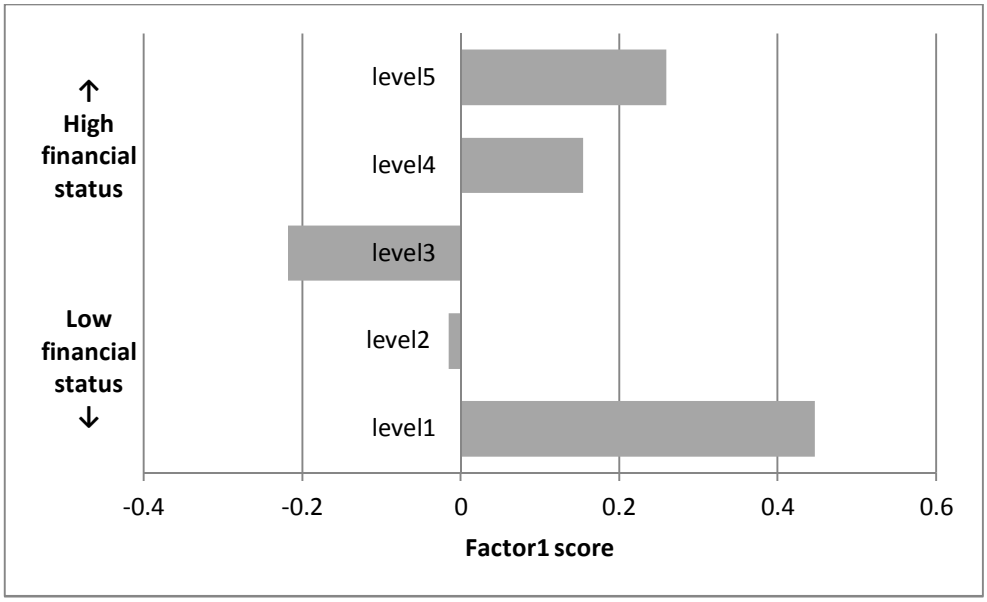

Figure 3.3: Mean of factor one scores as affected by financial status for conventional consumers. Note: financial status ranged from level 1 (not enough financial resources) to level 5 (more than enough financial resources).

3.3.4. The anti-US rallies in 2008

Korean consumers felt that GM foods are the most important food-related issue, closely followed by BSE (Table 3.12). After the BSE rallies in 2008, imports of US beef greater than three years old was banned and US beef was rarely consumed in Korea for two years (Heo et al., 2010). Quantities of imported US beef have increased slowly as quarantine and inspection protocols were instituted and the confidence of the Korean public was restored (Jeong et al., 2012). In 2013, share of US beef in imported beef was 37.5% falling from 75.3% in 2003 (Hwang & Park, 2014)

Table 3.12: Important food issues

Food issue	Mean [a] (SE)
GM foods	2.87 (0.09)
BSE	3.01 (0.08)
Pesticides	3.19 (0.09)
Avian influenza	3.96 (0.08)
Melamine	3.97 (0.08)

[a] Most important=1, least important= 6

Anger towards the Korean government

All stakeholders indicated the major motivation behind the 2008 BSE rallies was public anger against the Korean government. People perceived that the Korean government had surrendered to pressure from the US government and US beef exporters. They also realized that the trade contracts regarding US beef were much less favourable to Korea than the contract between Japan and the US. At that time, Japan was negotiating with the US to import beef less than 20 months old while Korean government accepted import of the US beef less than 3 years old including

specified risk materials (SRM)[3] and over 3 years old excluding SRM. Any such concerns were much more related to risks associated with industrial trade rather than with public health.

> *"The context for the BSE rallies was distrust towards the government attitudes that reflected the US's requests rather than Korean safety during negotiations. The importation contract about the age of slaughtered cattle works in Japan's favour. If industrial products, e.g. fridges, are broken, the owner can request an exchange. However, foods are different than industrial products. Beef infected by BSE affects human health, so safety is the first priority. As BSE symptoms appear very slowly, students and young adults were very worried their health and so participated in the BSE rallies."*
>
> *(Yeol Choi: Korea Green Foundation)*

> *"People were angry with the government that had focused on economic and political security priorities rather than people's health and life."*
>
> *(Jae-Sook Choi: Eco Cooperatives)*

Concern over safety

After the Korean government announced that US beef would be imported, many people started to share information about BSE-related risks on the Internet. This information spread rapidly among students and youth who are the recipients from collective food service provided by school food companies. They were worried that these companies would start to use the US beef because they select this low-priced imported beef over more expensive domestic beef.

[3] The tissues of ruminant animals, which are determined by scientific research to contain the agent thought to cause BSE and its human variant Creutzfeldt-Jakob disease. i.e. brain, skull, eyes trigeminal ganglia, spinal cord, vertebral column, and dorsal root ganglia

> *"The major reason underlying the rallies was public concern over food safety. At first, high school students mobilized because of their experiences of low-quality school lunches provided by companies that were more interested in pursuing profits than in student health."*
>
> *(Mi-Hyeok Gwon: Korean Womenlink)*

These concerns were aggravated by the terminal nature of BSE and its human variant Creutzfeldt-Jakob disease (CJD).

> *"People were concerned because BSE is fatal and hard to control."*
>
> *(Min Sun-Park: Agricultural Cooperative Collage)*

In total, 68.8% of the conventional consumers participating in this study responded negatively to the statement that 'beef imported from the US is safe' and only 17.3% of represents agreed 'scientific research about impacts of BSE on human health is adequate' (Table 3.13). These perceptions will have long-lasting influences on consumer behaviours, since 79.9% of survey respondents agreed that 'food scares surrounding BSE will continue to affect Korean consumer perceptions of food in the future' (Table 3.13).

Table 3.13: Conventional consumer perceptions of BSE

Question	Mean[a] (SE)	- /+ (%) [b]	N/DK [c]
Beef imported from the US is safe.	2.57 (0.07)	68.8/7.8	17.8/5.8
Food scares surrounding BSE will continue to affect Korean consumer perceptions of food in the future.	5.44 (0.07)	10.3/74.0	12.3/3.5
Scientific research about impacts of BSE on human health is adequate.	3.2 (0.08)	53.4/17.4	22.3/7.0
I trust mass media (Internet, TV) over the government about BSE-related information.	4.59 (0.08)	21.3/54.3	21.8/2.8
I support the humane treatment of livestock even though this might increase prices of meat.	5.14 (0.07)	10.3/63.5	21.7/4.5
There is a need to inspect Korean beef for safety.	5.61 (0.06)	4.8/82.5	12.0/0.8

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N: Neutral, DK: Don't know

3.3.5. Positive implications of the BSE rallies

Consumers awareness of food safety

Consumer responses to BSE-related concerns over food safety showed that awareness rapidly increased and came to represent an issue that was unlikely to decline in importance in the future. Stakeholders emphasized that it was meaningful that youth and future generations became aware of food safety.

> *"The BSE rallies caused people to recognize the importance of food safety. They realized that access to safe food is their right."*
>
> *(Youn-Soon Kim: Happy-Centre Cooperatives)*

This process of increased awareness among the young had already commenced before the BSE rallies.

> *"Younger generations were aware of the danger of foods and expressed their voices."*
>
> *(Won-Gak Jung: iCoop)*

Importantly, the BSE rallies evolved into a broader anti-government movement.

> *"After the rallies, government and politicians realized people are very concerned food safety and quality of life. Moreover, food issues can be easily turned into political issues."*
>
> *(Mi-Hyeok Gwon: Korean Womenlink)*

These movements were ultimately suppressed by Korean police using water cannons and fire extinguishers, brutal force by elite police squads, and harsh arrests that even included bystanders (Lee et al., 2010). Even though the rallies were suppressed with state-mediated violence, Korean politicians realized that people were greatly concerned over food safety and dealt with these food issues cautiously.

Growth of Korean livestock farms

Korean beef farms increased their incomes in 2008 due to the US beef-scare, despite Korean beef being 2-3X more expensive than US-imported beef.

> *"The consumption and production of Korean livestock in 2008 increased 20% compared to 2007. Korean cattle farms made huge profits. After the rallies, Korean consumers realized that price was no longer the sole priority when choosing food."*
>
> *(Eun-Mee Jeong: KREI)*

Public attention regarding alternative food systems

During the rallies, Korean consumer cooperatives also experienced tremendous increases in memberships and sales. The mass media in Korea paid

additional attention to alternative food systems, particularly direct marketing, and consumer cooperatives, as one of the solutions for protecting food safety.

> *"The media was interested in consumer cooperatives and recommended those as alternatives to the global food system."*
>
> *(Youn-Soon Kim: Happy-Centre Cooperatives)*

3.3.6. Negative implications of the BSE rallies

Public distrust in government

As a result of the rallies, people become much more aware that the Korean government had abandoned its responsibility to protect public health, which some at least attributed to outside market pressures.

> *"I realized that our government's attitude toward the public was changed by pressure of the US and the government has ignored the public's health."*
>
> *(Conventional consumer, Seoul #23)*

Indeed, 54.6% of conventional consumers agreed that 'I trust mass media (Internet, TV) over the government about BSE-related information' whereas only 21.3% disagreed (Table 3.13).

Avoidance of US-beef purchases

The Korean public avoided purchasing US beef in part because of fears related to BSE but also because of negative attitudes towards the US government. Consumers were furious that the US government and American beef exporters had pressured the Korean government to loosen restrictions regarding beef importation and had discriminated against Korean consumers in favour of those that were Japanese. Although it was widely recognized that any risk of BSE infection was very low and

while, Korean consumers were sometimes open to buying beef imported from non-American sources, they were generally united in their refusal to buy US beef.

> *"If the Korean government reflected public opinions in their policies and the US government had respected these policies, Korean people may not have rejected US beef. Koreans did not buy the US beef although the possibility of infection was very low. Now US beef is rarely sold in Korea, although, Australian beef is selling well."*
>
> *(Yeol Choi: Korea Green Foundation)*

After the rallies, imports of US beef increased from 49,973 tonnes in 2009 to 90,561 in 2010 and 100,359 in 2012. However, these numbers remained far below pre-rally levels: 199,000 tonnes in 2003.

Blind trust in domestic beef

Consumers showed changes in and sometimes conflicting attitudes towards the safety of Korean beef. Some were blind in their support, and as indicated above as sales of Korean beef increased after the rallies.

> *"The negative thing is that people trust blindly Korean beef even though we cannot convince them about the safety of these products."*
>
> *(Jae-Sook Choi: Eco Cooperatives)*

Yet awareness regarding any related safety issues was also increasing. In total, 82.5% of respondents in this study agreed that 'there is a need to inspect Korean beef for safety' (Table 3.13). Interviewees also mentioned that there were concerns about BSE-associated risks in Korean beef.

"Some people are concerned about safety of Korean beef as the cattle has been fed dangerous feed."

(Min-Sun Park: Agricultural Cooperative Collage)

3.3.7. Consumer attitudes to BSE-associated risks in food

These results show that the BSE rallies influenced the behaviours and diets of 37.8% of respondents. Indeed, 76.5% of respondents answered the open-ended question, 'how the BSE did rallies in 2008 influence your attitudes towards food'. Among these, 19% responded that they had become more aware about food safety, and 16.8% indicated that they checked food labels in order to determine food origin.

"After the BSE rallies, I check the labels of all food that I purchased for my children."

(Conventional consumer, Seoul #5)

Moreover, 13% were concerned about inadequate feeds and the inhumane treatment of livestock during the rearing process (Table 3.14). In total, 48.8% of consumers had become more aware of food safety-related issues.

"I avoid eating meat; instead, I choose to have vegetables after watching the TV program about mass rearing production of livestock."

(Conventional consumer, Seoul #27)

On the other hand, 15.6% decided not to eat imported beef and 7.3% would specifically not eat any US beef. Additionally, 11.7% of consumers reduced their consumption of meat and 3.2% ate more pork and chicken (Table 3.13).

Table 3.14: Impacts of the BSE rallies on conventional consumer attitudes towards food (n=315)

Consumer attitudes	Frequency [a]	Proportion
Increased awareness about food safety	60	16.3%
Check food labels (i.e. origins of foods)	53	14.4%
Don't eat imported beef (i.e. purchase Korean beef)	49	13.4%
Concerns over processes of rearing livestock	41	11.2%
Restraints in eating meat (prefer eating vegetable)	37	10.1%
Negative attitudes towards US beef	23	6.3%
Distrust in government	22	6.0%
No impact	14	3.8%
Distrust all foods	13	3.5%
Psychological impacts (fear and anxiety)	12	3.3%
Prefer pork and chicken	10	2.7%
Distrust all beef	8	2.2%
Restraints in eating out	1	0.3%
Others	24	6.5%

[a] Numbers of responses to the open-ended question, "How has the BSE rallies in 2008 in Korea influenced your attitudes towards food?"

After the rallies, the Korean government established new regulations that required that restaurants should inform customers of the origin of any foods that they sold; however, customers had reason to doubt the veracity of this information.

> *"The government announced the policies that farmers and restaurants' owners should provide guests with food origin, especially beef. However, I doubt whether the restaurants provide the correct information."*
>
> *(Jae-Sook Choi: Eco Cooperatives)*

3.4. Discussion

In general, the activist, government representative, and scientist I interviewed all spoke to both benefits and risks associated with global agri-food system and the Korean rural crisis. Participants agreed that 'cheap price' and ready 'access to abundant food' were the main benefits whereas 'threats to food safety' and 'declines to rural communities' represented the main risks. These insights corresponded with conventional consumers' responses to the questionnaire. They, too, indicated that 'food safety' and 'food price' were important factors, although 'food freshness' (quality) was ranked even higher. Many countries achieve economic growth through industrial development as facilitated by international economic institutes such as World Bank and IMF (Martin & McDonald, 1986). Since 1960s, Korea has successfully pursued labour-intensive industry growth by providing abundant labour at low wages, so that the Korean economy ranked fourteenth out of 192 nations according to Gross Domestic Product (GDP) in 2013 (World Bank, 2014) Indeed, total exports in Korea increased four-fold from 1997 to 2013 (Korea International Trade Association, 2014) and Korea negotiated Free Trade Agreement with 49 nations over that time period. These increases in Korean industrial exports corresponded with concomitant increases in food imports.

Over that same time period, Korean agricultural policies have focused on rice self-sufficiency through the Green Revolution and the mechanization of rice farming. As rice is a staple food for most Asian, rice prices and self-sufficiency are very important political flashpoints for politicians and governments in Asia. Thus, when the global food crisis occurred in 2008, Vietnam, Cambodia, India and Egypt all placed restrictions on rice exports in order to stabilize rice supply and prices (Headey

& Fan, 2010). These export restrictions infringed on the basic principles of the WTO. Accordingly, Moon (2011) suggested that international society should focus on addressing the agricultural concerns of nations rather than forcing agricultural free trade as agriculture is too political and fundamentally differs from manufactured commodities. This view is applicable to Korea, which as a net food importer, is thus limited in its ability to respond and thus vulnerable to global food crises.

Koreans often perceive that food importation is essential for food sufficiency because of their country's small land areas and high population. Nevertheless, most survey respondents showed negative attitudes toward imported foods and the global agri-food systems. These negative sentiments emerged from or were reinforced by anti-BSE rallies in 2008. In part because of this public pressure, the Korean government has changed regulations and now requires that all foods explicitly indicate any ingredients and origins. Yet, many difficulties remain when tracing and verifying food origins and food processing (Lee et al., 2011). These steps are inadequate since Korean consumers are reluctant to buy imported foods because of highly publicized food safety risks associated with imported agricultural commodities (e.g. BSE but also GMO, melamine etc.).

Moreover, this resistance reflects an underlying distrust in the ability of the government in Korea and other countries in Asian to manage, and mitigate these risks (Lee et al., 2011; Scott et al., 2014). In Korea, the lack of public confidence is caused by inadequate governmental regulations. Thus, the Korean government established high tolerance limits for radioactive contamination in food and adopted uncertain methodologies for establishing contamination levels (Hansalim, 2015). In response, environmental organizations and consumer cooperatives fundraised for appropriate

monitoring instruments and launched an independently run Radioactivity Watch Centre. This Centre regularly announces the status of radioactive contamination in sea-food and agricultural products. Public and media trust these reports rather than those arising from the Ministry of Food and Drug Safety (Korea JoongAng Daily, 2014). Unless Korean government changes its stance on advocating industrial benefits rather than public food concerns, the public will remain suspicious of the Korean government's ability to manage food safety.

Korean consumers in this study were mostly concerned about the prices and quality of locally produced foods. Yet, only 18.4% of consumers trusted the safety of foods provided by large retailers. It seems that Koreans generally have negative perceptions of foods they purchase. For this reason, Koreans need to practice purchasing choices that can influence more acceptable food production practices or participate in social actions and movements that can improve food safety and quality. However, many conventional consumers in this study were unlikely to express publicly their opinions about foods. Moreover, only half of respondents in this study were aware of consumer purchasing power (Table 3.8). Such consumer attitudes and behaviours have been observed around the world. Bray et al. (2011) identified a number of different factors that shape consumer behaviour including food price and quality but also experience, information, and inertia. Any gaps between consumer concern and purchasing practice were in turn often caused by incomplete access to market information regarding product quality and benefits (Lehner, 2013). The global agri-food system intensifies these pessimistic behaviours as the system make it difficult to verify food safety due to the great distances and the great many steps associated with food distribution.

It is however important to recognize that without consumer awareness and participation in the ethical and just consumption of foods, it becomes difficult to build effective alternatives to the existing corporate food system or to fundamentally improve food safety. In this regard, these results show that it was only after the anti-US beet import rallies as well as the Fukushima nuclear accident and the 2011 referendum associated with the free school lunch program that Korean consumer awareness of food safety and food equality began to change in any substantial or sustained way.

Thus, in addition to increases awareness, consumer behaviour was affected by the above controversies as they related to food safety. To avoid potentially consuming US beef, these results show that Korean consumers began to check food labels, to purchase Korean beef, to restrain from eating in restaurants, and to purchase more vegetables and more pork and chicken. Indeed, before the controversy arose, US beef was rarely sold and Korean cattle farms enjoyed relatively high incomes.

Protestors against the import of US beef were also resisting the neo-liberal agenda of the Korean government that acted to protect profits of industry at the expense of public welfare (see also Kim 2010; Lee et al., 2010). Participants in these BSE rallies regarded ongoing government-to-government negotiations as an infringement of Korea's sovereign ability to protect food safety and public welfare. The US government demanded that Korea re-open its beef market as a requirement of approval of the Korea-US FTA without inspection and guarantee of safety of US beef (Lee et al., 2010). The Korean government defended its decision to do so as reflecting the key role of 'cheap and good quality' US beef in maintaining the nutritional diet of ordinary people in Korea (Hong, 2008).

These anti-BSE rallies reflected the characteristics of and the mobilizing processes that underlie many social movements. A high population density and ready access to the Internet facilitated the widespread sharing of information in order, to organize and manage the rallies. It also reduced reliance on government-controlled information sources, including the conventional media. While the rallies ultimately declined in number and participation due to class heterogeneity of participants and the lack of formal networks of support and resource sharing (Kim, 2014), public confidence in the government was deeply threatened and difficult to restore. In fact, as activists in this study mentioned, these rallies had much less to do with BSE infection or even public concerns about food safety than it did with the government's willingness to abandon consumer concerns and to sacrifice the domestic food system for industrial growth. If the Korean and, indirectly, the US governments continue to ignore consumer food concerns, resistance to US imports, beef or otherwise, will continue to re-emerge in the future.

3.5. Conclusions

This study explored Korean consumer attitudes towards global food system and analyzed the social and political implications of the anti-US beef rallies in 2008. Korea is one of the net food importers and opened its food market in accordance with WTO regulations. The global agri-food system has provided cheap and abundant foods for consumers; simultaneously, it has undermined Korean confidence in food safety and agriculture. In this regard, Korean consumers and experts are critical of the global agri-food system and the increased risks it poses for the domestic food production system. Furthermore, they questioned the roles that the WTO DDA played

in addressing food concerns over the world. These international intuitions advocate that global agri-food system has increased food trade and mitigated the unbalance of food supply and demand in a global context. However, it is uncertain if many small-scale farmers in developing countries have been able to benefit from free trade liberalization. Therefore, applied analyses that how agricultural trade liberalization has influenced economic and political structure and financial flow within nations are required.

Korean experts suggested that public concern of food safety was the underlying motivation for anti-US beef rallies. However, these rallies were more generally motivated by public resistance against Korean government that had pursued trade liberalization and industrial profit at all coats. Consumers have since come to deeply distrust the food safety management of the Korean government, and some have established independent research institutes and intensified observations of food safety. Additionally, Korean food practitioners have endeavoured to build various distribution systems for organized consumer groups, which in turn will act to revitalize Korean agriculture and rural communities.

References

Amid, J. (2007). The dilemma of cheap food and self-sufficiency: The case of wheat in Iran. *Food Policy*, 32(4), 537-552.

Anderson, K. (2011). Globalization's effects on world agricultural trade, 1960-2050. *Philosophical Transactions of the Royal Society B,* 365 (1554), 3007-3021.

Anderson, M.D. (2008). Rights-based food systems and the goals of food systems reform. *Agriculture and Human Values*, 25(4), 593-608.

Back, J. & Koo, W. (2010**).** Analyzing factors affecting U.S. food price inflation. *Canadian Journal of Agricultural Economics*, 58(3), 303-320.

Baker, L. E. (2004). Tending cultural landscape and food citizenship in Toronto's community gardens. *Geographical Review*, 94(3), 305-325.

Barling, D. (2007). Food supply chain governance and public health externalities: Upstream policy interventions and the UK State. *Journal of Agricultural and Environmental Ethics*, 20(3), 285-300.

Beghin, J., Bureau, J-C., & Park, S. (2003). Food security and agricultural protection in South Korea. *American Journal of Agricultural Economics*, 85(3), 618-632.

Bishop, T., Reinke, J. & Adams, T. (2011). Globalization: Trends and perspectives. *Journal of International Business Research*, 10(1), 117-130.

Blake, M. K., Mellor, J. & Crane, L. (2010). Buying local food: Shopping practices, place, and consumption networks in defining foods as "local". *Annals of the Association of American Geographers*, 100(2), 409-426.

Bonanno, A. (2004). Globalization, transnational corporations, the state and democracy. *International Journal of Sociology of Agriculture and Food,* 12, 37-48.

Bray, J., Johns, N. & Kilburn, D. (2011). An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics*, 98(4), 597-608.

Brook, R, K. & McLachlan, S. M. (2006). Factors influencing farmers' concerns associated with bovine tuberculosis in wildlife and livestock around Riding Mountain National Park. *Journal of Environmental Management*, 80(2), 156-166.

Burch, D. & Lawrence, G. (2005). Supermarket own brands, supply chains and the transformation of the agri-food system. *International Journal of Sociology of Agriculture and Food,* 13(1), 1-18.

Burnham, K. & Anderson, D. (2002). *Model selection and multimodel inference: A practical information-theoretic approach* (2nd Edition). Springer: New York.

Buzby, J. C. & Roberts, D. (2011). Food trade and food safety violations: What can we learn from import refusal data? *American Journal of Agricultural Economics*, 93(2), 560-565.

Cavalcanti, J. S. B. (2004). New challenges for the players in global agriculture and food. *International Journal of Sociology of Agriculture and Food,* 12, 29-36.

Challies, E. R. T. (2008). Commodity chains, rural development and the global agri-food system. *Geography Compass,* 2(2), 375-394.

Choi, J. & Kim, Y. (2011). *Environment friendly food encyclopaedia*. Seoul: Damso Publishing. [In Korean]

Choi, J., Woo, B. & Hwang, Y. (2010). *A study on conceptualization of food self-sufficiency rate and re-establishing its target in Korea*. Seoul: Korea Rural Economic Institute. [In Korean]

Choi, S. (2011). *The Korea-US FTA: Impact on Korean agriculture and tasks*. Seoul: Korea Rural Economic Institute. [In Korean]

Christian, T. & Rashad, I. (2009).Trends in U.S. food prices, 1950-2007. *Economics and Human Biology*, 7(1), 113-120.

DeLand, L. B. (2002). Place, work, and civic agriculture: Common fields for cultivation. *Agriculture and Human Values*, 19(3), 217-224.

DeLind, L. B. (2011). Are local food and the local food movement taking us where we want to go? Or are we hitching our wagons to the wrong stars? *Agriculture and Human Values,* 28(2), 273-283. .

Edward, R. &Tropp, D. (2006). *National Farmers Market Manager Survey*. USDA Agricultural Marketing Service. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5077203&acct=wdmgeninfo

FAO. (2015). World food situation: FAO food price index. Retrieved from http://www.fao.org/worldfoodsituation/foodpricesindex/en/

FAO (2009).*The state of agricultural commodity markets: High food prices and the food crisis-experiences and lessons learned.* FAO Sales and Marketing Group Communication division. Retrieved from http://www.fao.org/docrep/012/i0854e/i0854e00.htm

Farmers Market Canada. (2009). The National Farmers' Market Impact Study 2009 Report. Retrieved from http://www.farmersmarketscanada.ca/Upload/file/FMC%20FINAL%20Brochure%202009-ENG.pdf

Feagan, R. & Henderson, A. (2009). Devon acres CSA: Local struggles in a global food system. *Agriculture and Human Values*. 26(3), 203-217.

Feagan, R., Morris, D. & Krug, K. (2004). Niagara region farmers' markets: Local food systems and sustainability considerations. *Local Environment,* 9(3), 235-254.

Feenstra, G. (2002). Creating space for sustainable food system: Lessons from the field. *Agriculture and Human Values,* 19(2), 99-106.

Feenstra, G. (1997). Local food systems and sustainable communities. *American Journal of Alternative Agriculture*, 12(1), 28-36.

Friedland, W.H. (2004). Agrifood globalization and commodity systems. *International Journal of Sociology of Agriculture and Food,* 12, 5-16.

Flora, C.B. &Bendini, M. (2007). Globalization and changing relation among market, state and civil society: A comparative analysis of Patagonia and Iowa. *International Journal of Sociology of Agriculture and Food,* 15(2), 1-21

Gao, S. (2010). Discussion on issue of food security based on basic domestic self-sufficiency. *Asian Social Science,* 6(11), 42-48.

Gilbert, C. L., & Morgan, C. W. (2010). Food price volatility. *Philosophical Transaction of the Royal Society B*, 365(1554), 3023-3034.

Gilbrt, C. L. (2010). How to understand high food prices. *Journal of Agricultural Economics*, 61(2), 398-425.

Godfray, H. C. J., Beddington, J. R., Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Pretty, J., Robinson, S., Thomas, S. M. &Toulmin, C. (2010). Food security: The challenge of feeding 9 billion people. *Science*, 327(5967), 812-818.

Godfray, H.C.J, Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Nisbett, N., Pretty, J., Robinson, S., Toulmin, C., &Whiteley, R. (2010). The future of the global food system. *Philosophical Transactions of the Royal Society B,* 365(1554), 2769-2777.

Guptil, A. & Wilkins, J. (2002). Buying into the food system: Trends in food retailing in the US and implications for local foods. *Agriculture and Human Values,* 19(1), 39-51.

Guthman, J., Morris, A. W. & Allen, P. (2006).Squaring farm security and food security in two types of alternative food institutions. *Rural Sociology,* 71(4), 662-684.

Hassanein, N. (2003). Practicing food democracy: A pragmatic politics of transformation. *Journal of Rural Studies*, 19(1), 77-86.

Headey, D. (2011). *Was the global food crisis really a crisis? Stimulations versus self-reporting*. Washington: International Food Policy Research Institute.

Headey, D. & Fan, S. (2010). *Reflections on the global food crisis: How did it happen? How has it hurt? And how can we prevent the next ones?* Washington: International Food Policy Research Institute.

Hendrickson, M. K., & Heffernan, W. D. (2002). Opening spaces through relocalization: Location potential resistance in the weaknesses of global food system. *Sociologia Ruralis*, 42(4), 347-369.

Heo, D., Lee, H. & Lee, J. (2010). *Impact of increase in beef import on domestic beef price*. Seoul: KREI Agricultural Policy Research. [In Korean]

High Level Panel of Experts on Food Security and Nutrition. (2011). *Price volatility and food security*. NY: The UN Committee on World Food Security.

Hojjat, T. A. (2009). Global food crisis – Food versus fuels. *Competition Forum*, 7(2), 419-426.

Hwang, M. & Park, J. (2014). *Trend after liberalization of beef imports*. Seoul: Nonghyup Economic Research Institute.

Hong, S. (2008). Overall import of US beef and life politics. *The Radical Review*, 36 (Summer 2008), 181-185.

Hwang, Y. (2013). *Food demand and supply*. Seoul: Korea Rural Economic Institute: [In Korean]

Jayasuriya, S., Mudbhary, P., & Broca, S. (2013). Food security in Asia: Recent experiences, issues, and challenges. *The Economic society of Australia*, 32(3), 275-288.

Jeong, M., Woo, B. & Lee, H. (2012). *Impact of BSE in the US on domestic livestock market*. Seoul: KREI Focus on Agricultural policies. [In Korean]

Josling, T. (2003). Key issues in the world trade organization negotiations on agriculture. *American Journal of Agricultural Economics*, 85(3), 663-667.

Kim, J. (2014). The networked public, multitentacled participation, and collaborative expertise: US beef and the Korean candlelight protest. *East Asian Science, Technology, and Society*, 8(2), 229-252.

Kim, W. (2010). Polanyi's double movement and neoliberalization in Korea and Japan. *Social Movement Studies: Journal of Social, Cultural and Political Protest,* 9(4), 373-392.

Konefal, J., Mascarenhas, M., & Hatanaka, M. (2005). Governance in the global agro-food system: Backlighting the role of transnational supermarket. *Agriculture and Human Values,* 22(3), 291-302.

Korea Animal, Plant and Fisheries Quarantine Inspection Agency.(2011). Information for Importation. Retrieved from http://www.meatwatch.go.kr/cs/dst/bds/selectNvrqsNatReport.do. [In Korean]

Korea International Trade Association. (2014). Statistics for export and import. Retrieved from http://stat.kita.net/stat/kts/sum/SumImpExpTotalList.screen

Korea JoongAng Daily. (2014). Radioactivity in 6.7% of see food. Retrieved from http://article.joins.com/news/article/article.asp?total_id=16584985&cloc=olink|article|default [In Korean]

Kornelis, M., Jonge, J., Frewer, L. & Dagevos, H. (2007). Consumer selection of food safety information sources. *Risk Analysis*, 27(2), 327-335.

Lee, H. (2011). *Is it impossible for food price support policies?* Seoul: Agriculture and Farmer Policy Institute, Issue Report 55. [In Korean]

Lee, K., Jo, S., Jeon, S., Kim, S. & Song, Y. (2011). *The economic effect and utilization of country-of-origin labelling in Korea*. Seoul: Korea Rural Economic Institute. [In Korean]

Lee, S., Kim, S., & Wainwright, J. (2010). Mad cow militancy: Neoliberal hegemony and social resistance in South Korea. *Political Geography*, 29(7), 359-369.

Lehner, M. (2013). Alternative food systems and the citizen-consumer. *Journal of Agriculture, Food Systems and Community Development,* 3(4), 49-53.

Levkoe, C. Z. (2006). Learning democracy through food justice movements. *Agriculture and Human Values,* 23(1). 89-98.

Loureiro, M. L. & Umberger, W.J. (2007). A choice experiment model for beef: What US consumer responses tell us about relative preferences for food safety, country-of-origin labeling and traceability. *Food Policy*, 32(4), 496-514.

Martin, W. & Mattoo, A. (2010). The Doha Development Agenda: What's on the table? *The Journal of International Trade & Economic Development*, 19(1), 81-107.

Martinm M. &Mcdonald, J. (1986). Food grain policy in the Republic of Korea: The economic costs of self-sufficiency. *Economic Development and Cultural Change*, 34(2), 315-331.

McCalla, A. F. (2009). World food prices: Causes and consequences. *Canadian Journal of Agricultural Economics*, 57(1), 23-34.

Moon, W. (2011). Is agriculture compatible with free trade? *Ecological Economics*, 71(1), 13-24.

Moreira, M. B. (2004). Agriculture and food on the globalization age. *International Journal of Sociology of Agriculture and Food,* 12, 17-28.

Müller, A. R. (2013). *Food security, development and the developmental state.* Retrieved from https://www.academia.edu/.

Piesse, J. & Thirtle, C. (2010). Agricultural R& D, technology and productivity. *Philosophical Transaction of the Royal Society B*, 365(1554), 3035-3047.

Scott, S., Si, Z., Schumilas, T. & Chen, A. (2014). Contradictions in state-and civil society-driven developments in china's ecological agriculture sector. *Food Policy*, 45(April 2014), 158-166.

Selfa, T. & Qazi, J. (2005). Place, taste, or face-to-face? Understanding producer-consumer networks in "local" food systems in Washington State. *Agriculture and Human Values,* 22(4), 451-464.

Statistics Korea. (2015). National Major Index. Retrieved from http://www.index.go.kr/potal/main/EachPage.do?mmenu=2&smenu=3

Swinnen, J. (2011). *The right price of food*. Belgium: LICOS Centre for Institutions and Economic Performance.

Stage, J., Stage, J., & Mcgranahan, G. (2010). Is urbanization contributing to higher food prices? *Environment and Urbanization*, 22(1), 199-215.

World Bank (2014). Gross domestic product 2013. Retrieved from http://databank.worldbank.org/data/download/GDP.pdf

Yamashita, K. (2006). Food and agriculture problems for Japan and the world in the twenty-first century. *Asia-Pacific Review*, 13(1), 1-15.

Yeung, R.M.W. & Morris, J. (2001). Food safety risk: Consumer perception and purchase behaviour. *British Food Journal*, 103(3), 170-186.

CHAPTER 4

CONSUMER ATTITUDES TOWARDS FOOD SELF-SUFFICIENCY AND FOOD SYSTEMS IN SOUTH KOREA

ABSTRACTS

Introduction: The Korean government has pursued and promoted intensive industrial economic growth since the 1970s. It established a cheap-food policy to help offset low-wage employment in manufacturing. As a result, domestic agricultural productivity has plunged in Korea and both food self-sufficiency and the rural population have rapidly declined over this time period. The goal of this study was to examine public perceptions and possible responses to these food-related changes.

Methods: Questionnaires were collected from 412 conventional consumers and 452 consumers that were members of Korean consumer cooperatives in 2009. Complementary interviews were conducted with 11Korean stakeholders including representatives of government, environmental NGOs, academia, and consumer cooperatives.

Results: Stakeholders were highly critical of government policies that focus on farmland amalgamation and land grabs in foreign countries as unrealistic and unethical, urged that the government should invest in domestic agricultural research and development. Consumers in this study responded negatively to this decline in food self-sufficiency. They insisted that these adverse impacts should be mitigated by new and proactive government policies that focus on reforms in distribution systems and that increase farmer incomes. Respondents were particularly interested in the role of local food systems in addressing low food self-sufficiency and rural decline. While most consumers identified the term 'local' to refer to the geographical region that surrounded them, stakeholders and food practitioners felt that local should be refer to Korean production as a whole. Moreover, they insisted that relationships between consumers and farmers were more important in building these regional food systems

than geographical distances when referring to small countries like Korea. The majority (85.4%) of respondents agreed that buying locally produced foods was an important and effective way to support farmers.

Conclusions: Although most supported these regional food systems, the building of such alternatives faced a number of barriers including limited social resources, uneven population distribution, and lack of infrastructure. Yet, the establishment of Korean consumer cooperatives and other alternatives such as free school lunch programs have helped overcome these barriers and supported regional food systems. Food activists and practitioners recognized that the organizing of and responding to consumer demands was the most important factor when building such alternative food systems.

Keywords: Agricultural industrialization, direct marketing, free school lunch programs, food self-sufficiency, Korean consumer cooperatives, local foods.

4.1. Introduction

The term "food security" was initially conceptualized in the mid-1970s and has since become a major paradigm for the international agri-food community (Boyer, 2010; Mechlem, 2004). It has adopted various concepts such as the balance between food demand and supply, food accessibility for vulnerable people, and food safety and nutritional balance (Nord et al., 2009; Timmer, 2005). In 2003, the Food and Agriculture Organization (FAO) adopted the definition of food security as "a situation that exists when all people, at all times, have physical, social, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (Shepherd, 2012). The FAO further explained that food security is achieved by producing foods and/or purchasing foods. Thus, the rate of food security is raised by increasing local food production and food importation, developing food distribution systems, and offering jobs to and increasing incomes of those living in poverty (FAO, 2002).

Meanwhile, food self-sufficiency is achieved when foods are provided by domestic production systems. However, since the 1980s, international institutions (i.e. World Trade Organization, World Bank, International Monetary Fund) have emphasized new approaches in agricultural development policies, which act to limit or even eliminate government intervention and to abandon the misguided concern for national (domestic) food self-sufficiency (Chang, 2009). These international institutions argue that these food self- sufficiency policies were fostered by inefficient economic development and xenophobia (FAO, 2003). Instead, they recommend building efficient food security policies. These policies include the cultivation of export-oriented cash crops to increase incomes for farmers, increased labour

productivity, and improved income distribution for food affordability (Sen et al., 2002; Shane et al., 2000). Further, they advise that developing countries should transform their pre-existing agricultural economies into ones that are industrial in nature. By implication, they insist that purchasing foods is more profitable for developing countries than producing agricultural products (Gao, 2010; Sen et.al., 2002). However, Chang (2009) argues that dismissing food self-sufficiency policy is inappropriate for countries with low economic development. If people are unable to afford foods to sustain their health and nutrition due to low incomes or high food prices, the resulting declines in population health, education, and labour productivity will overwhelm any attempts to restore the fundamental economy in these less developed countries. By contrast, developed countries are always able to import foods or to reorganize resources whenever foods security is threatened (Chang, 2009; FAO, 2011).

Contrary to these international trends in agricultural globalization, food security based on domestic self-sufficiency has remained as an important food policy strategy in some countries (Gao, 2010; Mears, 1984; Naher, 1997). This is especially true for China, which has a population of 1.3 billion and which expects that annual food demand will increase from the current 500 million tonnes to 720 million tonnes by 2030 (Gao, 2010). Experts estimate that the total amount of international food trade for China is currently 240 million tons and thus accounts for only 40% of its food requirement (Gao, 2010; Mai, 2008). Since about 70% of the Chinese population still lives in rural areas, food self-sufficiency policies are necessary for the protection of these rural communities and land distribution (Zheng et al., 2013).

In contrast, neighbouring South Korea (herein Korea) and Japan have both experienced rapid declines in the rate of food self-sufficiency over the last 30 years

(Choi, 2010; Matsuki, 2002). The international agricultural competitiveness of Japan has decreased due to its lack of arable land and changes in dietary patterns of the Japanese (Matsuki, 2002; Yamashita, 2006). Further, high land values, high rice prices, and subsidies for farmers hamper any land amalgamation and the adoption of mechanization when maximizing farming efficiency (Yamashita, 2006). In particular, the excessive conversion of farm-land to industrial or residential land use has caused an irreversible decline of agriculture in both countries.

In Korea, rate of grain self-sufficiency, including livestock feed, decreased from 29.7% in 2000 to 22.9% in 2012 in Korea (Hwang, 2013), and represent a sharp decline from over 50% in 1982 (Bae, 2014). Korean consumers often experience severe food price volatility. The cost of a Chinese cabbage used in kimchi, one of the Korean staple foods, increased from US$ 3.50 in 2009, US$ 10.40 in 2010 and then plunged to US$ 0.70 in 2011 (Lee, 2014). Korean farmers suffered from low yields in 2010, which was in part responsible for these price increases, but prices for these products subsequently collapsed in 2011 due to domestic over production and foreign imports. This volatility is a recurrent pattern in Korea as farmers generally produce any food item that received high-prices the previous year. Whenever yield failure and price volatility occur, Korean government always resorts to food imports from China to address consumer demands regarding prices instead of examining the role of the entire food chain (e.g. distribution costs) in affecting food prices (Moon & Jeon, 2012).

In 2010, the government-funded Korea Rural Economic Institute (KREI) established the goal of domestic food self-sufficiency by the year 2020. They adopted the concept of calorie (energy) based food self-sufficiency instead of quantity based food self-sufficiency that the government had used in the past (Choi et. al., 2010).

Caloric self-sufficiency refers to the ratio of calories derived from domestic foods to the total calories of consumed foods per capita per day. Using research conducted by KREI, the Korean government announced that grain self-sufficiency would be attained by 2020; more specifically 64.6% grain self-sufficiency excluding livestock feeds would be attained, although grain self-sufficiency including livestock feeds is now 29.8% and calorie self-sufficiency is now 50% (Choi et. al., 2010). Yet, there are still no policies or outreach that corresponds with these goals, indicating that they are unlikely to be accepted much less achieved (Lee, 2012). According to the Choi et al. (2010), such policies would need to expand domestic farm land, to develop breeding technology, and to manage food demand and supply for the long-term. These long-term production approaches would need to be complemented by the creation of nutritional education programs, the adoption of school lunch programs, and the promotion of local products that focused on increasing food self-sufficiency in the consumption sector. However, there is currently no consensus about the goal of food self-sufficiency in Korea and no financial support for achieving these ends. Indeed, the government seems intent on achieving food self-sufficiency by investing in and developing agricultural land in foreign countries, including Russia and Cambodia (Kim et al., 2011). Indeed, the Korean government invested US$ 121 million for foreign agricultural development from 2009 to 2013 and US$ 30 million in 2014. In 2013, about 14,000 tonnes of grain were imported by Korea. The Primorskii region in Russia accounts for 62% Korean investment in foreign agricultural development (Han et al., 2014). Civil society and farmers organizations have criticized these expansionist food policies as aggressive and as inherently unjust as they in turn displace the self-sufficiency of each host nation (Borras et al., 2013; Hong, 2011). Moreover, such

approaches have been criticized as unrealistic and ineffective because of the many inevitable and complicated political and diplomatic barriers (Lee, 2012).

Local food movements and local food systems have emerged as alternative approaches to achieving food self-sufficiency around the world. Local is, generally, connoted by geographic distance (Martinez et al., 2010). In Korea, discourses regarding local food tend to focus on food safety and support for domestic farmers rather than building shortened distribution systems and organizing consumer demand (Hwang, Chapter 3). These tendencies reflect the small land area, unbalanced population concentration in metropolitan area, and difficulties reforming the traditional wholesale market system. Local distribution systems participate in the wholesale market system as a first intermediary. In turn, the government-run Korean Agricultural Cooperatives supply foods to their stores located in urban centers as a form of direct market distributions (Jeon et al., 2009). As half of total Korean population lives in urban areas, the adoption of local food systems is complicated. Yet, local food practices are growing. These practices include the launching of farmers' markets, increased connection between consumers and farmers, and the development of regulations that support local food systems (Kim, 2007). However, such events are still irregular and especially uncommon in smaller urban centers and in rural areas.

One important approach to supporting domestic agriculture in Japan and Korea has been the establishment of large-scale consumer cooperatives. The Japanese first developed these diverse food distribution systems, most notably consumer cooperatives that supply domestically produced organic foods (Hiroshi, 1991; Moen, 2000). These consumer cooperatives are the most influential consumer movement organizations in Japan (Riethmuller, 1994) and currently comprise 584 consumer

cooperatives and 27 million consumers (Japanese Consumer's Co-operative Union, 2014). The business turnover of these consumer cooperatives amounted to USD 27.4 billion and accounted for 2.64% of retail distribution in 2013 (JCCU, 2014).

The *'teikei'* (Japanese for 'joint business') movement and the *'chisan-chisho'* (Japanese for 'locally produced, locally consumed') movements have played important roles in creating and supporting alternative local food systems that raise food self-sufficiency in Japan (Kimura & Nishiyama, 2008; Parker, 2005). The '*teikei*' is a community-supported agriculture and refer to 'cooperation' or 'joint business' whereas '*chisanchisho*' refers to locally produced and locally consumption (Arsil et al., 2014).

Large-scale consumer cooperatives have similarly come to play a key role in working towards food self-sufficiency in Korea, but have received very little attention by researchers Indeed, there is insight into the changes in food self-sufficiency that have occurred in this country. The goal of this study was to examine the implications these changes and any associated public responses. My more specific objectives were to explore consumer attitudes towards declines in food self-sufficiency in Korea and to explore possible solutions to this decline, especially those associated with local food systems. Better understanding of public attitudes towards local foods and local food systems will provide insight into the potential and limitations of alternative food systems in this country and their ability to mitigate existing and future food crises as characterised by yield failure, price volatility, and rural decline.

4.2. Methods

4.2.1. Study area

This study was conducted in South Korea (herein Korea). The total GDP (Gross Domestic Product) and population of Korea in 2009 were 832.5 billion USD and 48.747 million, respectively (The World Bank, 2011). Food self-sufficiency for grain including livestock feed in Korea dropped from 29.7% in 2000 to 22.9% in 2012 (Hwang, 2013). Indeed, Korea imported 8.11 million tonnes of maize, 5.52 million tonnes of wheat, and 1.23 million tonnes of soybean in 2012 (Table 4.1). In 2010, the largest quantity of agricultural products was imported from the US, followed in descending order, by China, Australia, and Brazil (Korea International Trade Association, 2011).

Table 4.1: Korean imports of maize, wheat, soybean, and rice in 2012 and associated food self-sufficiency in 2001 and 2012.

Commodity	Quantity (tonnes)	Food self-sufficiency (%)	
	2012	2001	2012
Maize	8,112,000	0.8	0.9
Wheat	5,517,000	0.1	0.7
Soybean	1,232,000	7.7	9.5
Rice	681,000	> 100	86.1

Source: Hwang, 2013.

Agriculture and rural communities have both declined in Korea over the last 50 years. The rural population decreased from 3.93 million in 2001 to 3.12 million in 2009 while the proportion of rural residents over 65 yoa increased from 24.4% in 2001 to 34.2% in 2009. The amount of farmland also declined from 1.88 million ha to 1.74 million ha over this same time period. As a result, the contribution of agriculture

to GDP decreased from 4% in 2001 to 2.4% in 2009 (Statistics Korea, 2010) (Table 4.2).

Table 4.2: Korean agricultural statistics for 2001 and 2009

	2001	2009
Rural population(million)	3.93	3.12
% of total population	8.3	6.4
> 65 yoa of rural population (%)	24.4	34.2
Farmland (million ha)	1.88	1.74
% of GDP	4.0	2.4

Source: Statistics Korea, 2010

Korean diets have also changed recently; consumption of rice and vegetables have declined sharply while meat and fruit have been increasingly consumed (Table 4.3).

Table 4.3: Per capita food consumption (kg/person/year) in Korea in 2001 and 2009

	Rice	Wheat	Vegetable	Fruit	Meat	Milk
2001	92.8	34.4	164.4	41.9	38.2	51.4
2009	80.5	32.2	148.9	48.3	42.9	52.8

Source: Hwang, 2013.

4.2.2. Data collection

This mixed methods study design integrated both quantitative and qualitative data collection and analysis. It was approved by the Joint-Faculty Research Ethics Board at the University of Manitoba (J2009: 085).

Consumers were surveyed using a questionnaire composed of both Likert-scaled and open-ended questions. The seven-page questionnaire was constructed to

examine attitudes regarding food consumption, food production, food safety, food self-sufficiency, global and alternative food systems, local foods, government policies, and the roles of consumer cooperatives in alternative food systems and food consumption. Consumers were stratified into two groups: consumers that belonged to consumer cooperatives (i.e. member consumers) and those that were not (i.e. conventional consumers). In total, 867 questionnaires were collected, comprising 412 conventional consumers and 452 member consumers. The survey data for conventional consumers were collected from the capital city (i.e. Seoul) and from five provinces (i.e. Gyeonggi, Gangwon, Chungcheong, Jeolla, and Gyeongsang) (Chapter 3 Figure 3.1.). These interviews in-person were conducted in train stations and parks and it took 30 – 40 minutes to complete. The surveyed data for member consumers were collected from four consumer cooperatives, Hansalim (n=137), iCoop (n=160), Dure (n=62), Happy-Centre (n=76), and others (n=17). Each cooperative collected the data from its affiliated regional cooperatives. Member consumers showed a gender and age bias. Among surveyed member consumers, 92.7% of respondents were women and 70.3% of respondents were 30-45 yoa because most members of consumer cooperatives in Korea are women and 84% are 30-44 yoa (Kim et al., 2007). The data for conventional consumers was conducted ensuring that a roughly equal mix of ages and male and female was sampled. The member consumers showed higher mean values than the conventional consumers in all demographic characteristics (Table 4.4).

Key stakeholder groups that were targeted included consumer cooperatives and civil society organizations, and to a lesser degree academic and governmental organizations. Semi-directed interviews were conducted with representatives from

each of these groups from July to October 2009. Eleven people were interviewed including five representatives from consumer cooperatives (i.e. one each from the Dure, Eco, Hansalim, Happy-Center, and iCoop cooperatives), four from civil society organizations (Korea Green Foundation, School Lunch, Korean Womenlink, and Korean Women Peasant Association), one academic organization (Agricultural Cooperatives College), and one government institute (Korea Rural Economic Institute). Each interview took 1 -2 hours to complete. Stakeholders were asked about the positive and negative implications of the global food system for Koreans, the 2008 rallies protesting the importation of US beef, low food self-sufficiency, local food systems, and any implications of the consumer cooperatives movement. All interviews were audio-recorded with permission of participant, subsequently transcribed, and then translated into English in their entirety.

4.2.3. Data analysis

Demographic data including age, income, education level, financial situation, the number of family members, and proportion of food expenditure were recorded for each survey and are presented here as means, standard errors, and proportion of **pos**itive and negative responses (Table 4.4). Differences in any variance of demographic data between conventional consumers and member consumers were analyzed using t-test (SPSS 13.0).

Factor analysis (varimax rotation) was used to identify the factor structure underlying the quantitative data set (SAS V9.2). Any variables (i.e. responses to Likert scale questions) with at least a 0.4 loading value were assigned to a factor. Cronbach alpha coefficients were calculated to test the reliability of the variables for

each factor. All Cronbach alpha values were >0.6 and were considered to be satisfactory for internal consistency of a scale and thus seen as appropriate for variable reduction (Hatcher, 1994)

Logistic regression models were developed using Akaike Information Criteria (AIC) for parameter estimation instead of testing of null hypotheses (Burnham & Anderson, 2002). AIC logistic regression examined all possible models and individual models for multiple variables or square variables. For AIC model selection, factor scores of respondents from factor analysis were used, and a binary dataset was created using the lowest and highest 33% of respondents for binary logistic analysis. ΔAIC_c values of <2 suggest substantial evidence for the model (Burnham and Anderson, 2002). Nine independent variables were used: age, membership, education, financial status, income, food expenditure, and number of family. The cumulative AICc weights were calculated for each independent variable by summing the AICc weights for all models containing that variable. Variables with the highest cumulative AICc weights have the greatest relative influence on respondent perceptions (Brook & McLachlan, 2006)

Qualitative data in this study were collected from stakeholder interviews and from the four open-ended questions included in the questionnaire. Emerging themes from qualitative data were identified and matched with those associated with the Likert responses (Johnson et al., 2007).

Table 4.4: Comparative socio-demographics of two consumer groups

Variables	Conventional (n=412)		Member (n=452)		Sig.[1] (2-tailed)
	Proportion(%)	Mean(SE)	Proportion(%)	Mean(SE)	
Age					
15-30	27.4	39.2 (0.63)	3.3	42.0 (0.32)	0.000
31-45	38.2		70.3		
46-60	30.0		25.3		
Over 60	4.5		1.2		
Financial					
Not enough (1)	5.1	3.03 (0.05)	3.6	3.07 (0.04)	0.558
Tight (2)	19.8		18.9		
No extra money (3)	43.3		44.8		
Extra money (4)	29.9		32.4		
Enough (5)	2.0		0.2		
Annual income					
Less than $7K (1)	7.0	3.64 (0.07)	2.1	4.28 (0.06)	0.000
$7K - $14,999 (2)	10.4		5.8		
$15K - $29,999 (3)	32.1		18.6		
$30K - $44,999 (4)	23.1		29.2		
$45K - $59,999 (5)	16.1		24.6		
> $60K (6)	11.4		19.7		
Family size					
1 person (1)	8.3	3.52 (0.06)	3.1	3.72 (0.04)	0.004
2 people (2)	10.6		4.9		
3 people (3)	17.9		20.9		
4 people (4)	47.1		59.1		
> 5 people (5)	16.1		12.0		
% Food Expenditure					
Less than 10% (1)	9.0	3.06 (0.06)	5.5	3.08 (0.06)	0.851
10 - 19% (2)	21.1		26.7		
20 - 29% (3)	35.9		35.2		
30 - 39% (4)	24.3		22.5		
40 - 49% (5)	6.1		6.9		
Over 50% (6)	3.7		3.2		
Education					
No high school (1)	4.8	4.1 (0.06)	1.6	4.51 (0.049)	0.000
Some high school (2)	5.1		0.2		
High school (3)	24.6		21.2		
Collage (4)	12.4		9.5		
University (5)	47.2		57.9		
Post graduate (6)	5.8		9.7		
Gender					
Female	58.1		92.7		
Male	41.9		7.3		

[1] Significant difference between two consumer groups for t-test (P<0.005)

4.3. Results

4.3.1. Implication of risks for food self-sufficiency in Korea

Consumer attitudes towards food self-sufficiency

In total, just over half (56.4%) of conventional consumers and the great majority (87.5%) of member consumers agreed with the statement 'low food self-sufficiency in Korea is an important issue to me' (Table 4.5). Member consumers were more critical of the government as 79.6% disagreed that Korean government has created adequate policies regarding food self-sufficiency, this in contrast to conventional consumers, of which only half (50.2%) disagreed with the statement. Meanwhile, some interviewed stakeholders indicated that Korea consumers were generally unaware of low food self-sufficiency because Korean had achieved food self-sufficiency for rice, which is the major staple food and has substantial cultural and symbolic importance for many consumers. However, other crops were characterized by much less self-sufficiency.

> *"We achieve 100 % of self-sufficiency for rice; the problem is very low self-sufficiency of soybean, corn, wheat, and animal feed."*
>
> *(Won-Gak Jung: iCoop)*

Although many Korean consumers thought that food self-sufficiency is an important, their behaviour did not correspond with these concerns.

> *"Because we achieve rice self-sufficiency, people do not realize its significance. However, they are concerned that there are too many low quality foods imported from China."*
>
> *(Mi-Hyeok Gwon: Korean Womenlink)*

Table 4.5: Consumer attitudes towards food self-sufficiency

Question	Conventional		Member		Sig (2-tailed)[c]
	Mean[a] (SE)	-/+ (%)[b]	Mean[a] (SE)	-/+ (%)[b]	
Low food self-sufficiency in Korea is an important issue to me.	4.85 (0.07)	14.3/56.4	5.96 (0.05)	2.2/87.5	0.000
Our government has created adequate policies for food self-sufficiency.	3.25 (0.07)	50.2/17.4	2.22 (0.06)	79.6/5.7	0019

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] Significant difference between two consumer groups for t-test (P<0.005)

Member consumers generally showed more positive and proactive attitudes towards food self-sufficiency than conventional consumers. Thus, 56.9% of member consumers represented positively about the question, 'is there a solution of food self-sufficiency in Korea?' whereas only 23.8% of conventional consumers showed positive attitude and 53.8% were unfamiliar with any solutions (Table 4.6).

Table 4.6: Consumer attitudes towards solutions to food self-sufficiency

Response	Conventional consumers		Member consumers	
	Proportion (%) [a]	Rank	Proportion (%) [a]	Rank
Positive	23.8	2	56.9	1
Negative	14.8	3	12.4	3
Don't know	53.8	1	25.4	2

[a] Proportion of responses to the question, "is there a solution of food self-sufficiency in Korea?"

Public perceptions regarding low food self-sufficiency

The most frequent criticism regarding changes in food self-sufficiency was that the Korean government had sacrificed domestic agriculture for industrial-centred economic growth (Table 4.7). Member consumers suggested that global issues including the commercialization of agriculture, climate change, and globalization were all responsible for low food self-sufficiency in Korea. Meanwhile, conventional consumers focused on domestic rural issues such as high populations and small land area, the aging of farmers, and rural depopulation as being important. Some stakeholders identified that government supports have focused on large farms and on the mechanization of farming rather than small-scale family farms that normally contribute to food self-sufficiency in Korea. Many conventional and member consumers (Table 4.7) and at least some stakeholders indicated that there was little hope for Korean food self-sufficiency in the future.

> *"There is no solution due to depopulation of rural regions and the old age of farmers. After Korean food market opening, farmers cannot make enough money for their living expense. I predict food self-sufficiency will be decreasing continuously in the future. The government agricultural policies are supporting large farms and are far from increasing food self-sufficiency."*
>
> *(Min-Sun Park: Agricultural Cooperative Collage)*

Table 4.7: Consumer attitudes towards low food self-sufficiency

	Conventional consumers		Member consumers	
	Frequency[a]	Rank	Frequency[a]	Rank
Government policies abandoning agriculture	13	1	27	1
No solution, no hope for domestic agriculture	7	2	4	2
High population, small land area	6	3	-	-
No need	5	4	-	-
Consumers behaviour	4	5	1	5
Depopulation of rural areas	3	6	-	-
High age of farmers	2	7	-	-
Government policy focusing on industry	2	7	-	-
Others	7	-	-	-
Commercialization of agriculture	-	-	3	3
Climate change	-	-	2	4
Globalization	-	-	1	5

a: Frequency of answer (multiple answer), from the open-ended question, 'Why do you think there is not a solution of food self-sufficiency in Korea?'

In addition to these government policies, the mass media has emphasized the importance of cheap food prices. When food shortage occurs due to severe climate and yield failure, the media only reports on issues related to high food prices without ever considering the role of domestic farms and food self-sufficiency. The government quickly responds to these cries by importing foods in order to stabilize food prices, this at the expense of domestic food self-sufficiency.

> *"The government does not have food policies that are appropriate for preparing for crises. When a food crisis occurred in 2008, the media encouraged wise consumption that is to search for and buy foods with cheap prices. Consequently, the importation of foods increased through global agri-food system."*
>
> *(Jae-Sook Choi: Eco Cooperatives)*

Policies regarding food self-sufficiency

Participants in this study identified number of solutions for promoting and increasing food self-sufficiency in Korea. However, these suggestions differed substantially between conventional consumers and member consumers. Conventional consumers wanted to establish government policies to support food self-sufficiency. They then felt, in descending order of importance, that other solutions included the support of direct marketing and associated improvements in distribution and policies that more generally supported rural communities and small-scale farmers, these were followed by the development of local food systems along with the support for large industrial agriculture and eliminating food imports. No conventional consumers felt that consumer cooperatives represented an effective solution to food self-sufficiency (Table 4.8).

In contrast, member consumers felt it was better to directly support farmers and rural communities (Table 4.8) and that government policies and large-scale industrial agriculture were much less important for improving food self-sufficiency. Member consumers further indicated, in descending order of importance, that other solutions for increasing food self-sufficiency would include the development of local food systems and education for consumers, the development of organic agriculture, revitalizing direct marketing and consumer cooperatives, and conserving agricultural land (Table 4.8).

Table 4.8: Consumer perceptions generated solutions to food self-sufficiency

	Conventional consumers		Member consumers	
	Frequency[a]	Rank	Frequency[a]	Rank
Establish food self-sufficiency policies	18	1	3	11
Vitalize direct market (improve distribution)	17	2	21	6
Establish policies supporting rural communities	12	3	133	1
Policies supporting small farms	11	4	62	2
Local food system	8	5	38	3
Large industrial agriculture	8	5	2	12
Stop foods importation (use domestic foods)	8	5	6	10
Develop agricultural technology	7	8	0	-
Support for organic agriculture	5	9	27	5
Stop the indiscreet land development (conserve agricultural land):	5	9	21	6
Explore purchase of agricultural land in other countries	3	11	0	-
Government food purchases	3	12	0	-
Education for consumers			38	3
Vitalize consumer cooperatives	0	-	21	6
Urban agriculture	0	-	8	9

[a] Frequency of answer (multiple answer) from open-ended question 'what is the solution of food self-sufficiency?'

Stakeholders, also, indicated that the Korean government did not have any goals or plans for food self-sufficiency, and that further university and scientific research was needed to facilitate changes in food self-sufficiency –the latter supplemented by case studies from other parts of the world.

> *"I think that academia needs to study and support the goal of food self-sufficiency in Korea. In 2005, we had lots of debates about the goal of food self-sufficiency in* iCoop *meetings. As there was no research regarding this issue, we agreed upon 36.6% as the goal for food self-*

sufficiency. That is the human temperature (36.6C). We approached it in an emotional way but not a scientific way. Switzerland has 60-70% of food self-sufficiency although 80% of its land area is mountainous. Personally, I think we need to study the Switzerland case."

(Won-Gak Jung: iCoop)

By focusing on agronomic practices along with agricultural policies, it might be possible to increase food self-sufficiency without addressing any declines in rural populations and communities as a whole.

"This means we can raise rate of food self-sufficiency by change of production methods or agricultural policies without increasing rural population."

(Won-Gak Jung: iCoop)

Yet, at least some of the other stakeholders felt it was also important to focus on these larger issues.

"Food self-sufficiency is related in sovereignty and self-determination. In other words, nations and people having low food self-sufficiency cannot have the right of self-determination, accordingly, they become to subordinate to other countries. It is desirable to have over 70% of food self-sufficiency."

(Geun-Haeng Lee: Hansalim)

4.3.2. Debate over solutions regarding food self-sufficiency

Food price concern vs. support for farmers

Consumers responded that small-scale farmers and local food systems should be supported in order to promote domestic agricultural production and thus food self-

sufficiency (Table 4.8). Some stakeholders, however, questioned whether consumers would generally be willing to pay for higher cost Korean produce.

> *"The solution to food self-sufficiency is the consumer willingness to purchase domestic products, but it is impossible due to high prices. Currently, the difference in price between Korean wheat and imported wheat differs by a factor of two. The policy of wheat self-sufficiency is hardly successful. I think that the key of raising self-sufficiency for wheat depends on consumer willingness to buy more expensive Korean wheat. Although Engel coefficient[4] of Korean is low, consumers avoid paying much money for foods."*
>
> *(Eun-Mee Jeong: KREI)*

Survey results showed that consumers wanted the government to support (subsidize) Korean farmers through changes in agricultural policy. One stakeholder suggested that double-tiered grain price system should be re-created for raising farmer income and providing cheap foods to consumers.

> *"Consumers need to recognize that it is important to pay proper prices rather than cheap prices for food. Otherwise, I think the government needs to adopt price support system like a double-tiered grain."*
>
> *(Youn-Soon Kim: Happy-Centre Cooperatives)*

Such a double-tiered system had first been adopted in 1969 but was subsequently abolished in 1997 in Korea. However, such policies would contribute to budget deficits and would potentially conflict with WTO-associated attempts to restrict the government support for domestic food production.

[4] The Engel coefficient is the proportion of family income that is spent on food.

Exploring farm land in other countries

There were differences in opinion regarding the importance of extending agricultural land in Korea. All the stakeholders and some of the survey respondents, especially member consumers, wanted to stop the conversion of farmland to industrial land (Table 4.8). A wide diversity of government, food experts, and civil activists, albeit very few survey respondents also suggested that purchasing farmland in foreign countries might be an effective response.

> *"We cannot solve low food self-sufficiency because farmland area is absolutely lacking. The best solution is that we possess farm land in China and produce safe foods."*
>
> *(Yeol Choi: Korea Green Foundation)*

However, others argued that the idea was not practicable because such land grabs in foreign countries contribute to political and social conflicts, and access to any production from this land might ultimately be threatened by such conflict.

> *"In 2008, when the world economic crisis occurred, the Chinese government prohibited any export of foods. The Korean Department of Agriculture and some experts suggested that we could purchase farmland in China or Mongolia; however, as you see from the Chinese government's response in 2008, it is not realistic."*
>
> *(Won-Gak Jung: iCoop)*

Increases in the number of farmers

A few (conventional) consumers thought that rural depopulation was one of the important causes of low food self-sufficiency (Table 4.7). Yet one stakeholder indicated that increasing farmer populations was not an effective solution in

industrialized societies and suggested that research was needed to identify the adequate number of farmers in Korea.

> *"Increasing rural populations in developed industrial societies is an impossible plan. In the 1990s, the Korean government proposed 2% of total population should be farmers. This was the most critical of all policies and influenced all other agricultural policies. The proportion of farmers in England has 2% of total population and that in Switzerland is over 7%. I think we need to study the Switzerland case because the natural circumstance is similar to Korea. Currently, our farmer population is 6-7%."*
>
> *(Won-Gak Jung: iCoop)*

He further indicated that changes in agricultural policies and the improvement of farming methods could help increase food self-sufficiency as well as Korea already achieved self-sufficiency for rice

4.3.3. Factors underlying consumer attitudes towards agriculture and foods

Factor analysis was used to better understand consumer attitudes towards risks associated food systems. Three factors were extracted in decreasing order of importance; the first factor reflected consumer attitudes towards food safety policies, the second reflected consumer attitudes towards agricultural industrialization, and the third reflected attitudes towards direct marketing. The proportion of variance explained by each of the factor was 23%, 8%, and 5%, respectively. Cronbach coefficient alpha values were acceptable at 0.81 for factor one, 0.72 for factor two, and 0.63 for factor three, indicating a reliable homogeneity within each factor (Table 4.9). The factor score of factor one ranged -2.40 to 4.13 and those of factor two and factor three were -2.51 to 3.17 and -4.35 to 2.64, respectively.

Factor analysis indicated that the two consumer groups differed in their attitudes towards food safety policies (factor one) and agricultural industrialization (factor two). Member consumers were much more critical of government food safety policies than conventional consumers. Thus, 83.7% of member consumers but only 48.3% of conventional consumers distrusted food safety as provided by large retailers (Table 4.9)

Conventional consumers were generally more positive about agricultural industrialization, as only 33.9% of conventional consumers but 77% of member consumers disagreed that Korean agriculture should adopt large industrial farming practices. In addition, 51.5% of conventional consumers but only 27.6% of member consumers felt that local food was generally too expensive (Table 4.9).

Table 4.9: Factor analysis underlying conventional and member consumer attitudes towards food and agriculture

Factor	Factor loading			Conventional consumer		Member consumer		Sig [c] (2-tailed)
	Fa. 1	Fa. 2	Fa. 3	+/- (%)	Mean(SE)[a]	+/- (%)	Mean(SE)[a]	
Factor 1: Food safety policies (Eigen value: 8.05, Cronbach coefficient alpha: 0.81)								
The Korean government is adequately managing food safety.	0.78			12.0/62.2	2.99(0.07)	2.9/86.1	2.16(0.05)	0.000
Current food policies adequately reflect consumer concerns in Korea.	0.69			20.1/51.0	3.32(0.08)	6.8/78.1	2.36(0.06)	0.000
I trust the safety of food provided by large retailers.	0.65			18.4/48.3	3.36(0.07)	3.8/83.7	2.19(0.6)	0.000
Farmers are now fairly compensated	0.61			6.1/77.2	2.48(0.07)	0.2/92.2	1.92(0.04)	0.000
Factor 2:Agricultural industrialization (Eigen value: 2.84, Cronbach coefficient alpha: 0.72)								
Korean agriculture should adopt large industrial farming practices.		0.66		31.9/39.9	3.84(0.09)	14.2/77	2.44(0.08)	0.000
Local food is generally too expensive.		0.62		51.5/19.2	4.42(0.07)	27.6/46.4	3.51(0.07)	0.000
Climate change increases agricultural productivity in Korea.		0.61		47.9/30.5	4.28(0.09)	21.0/56.8	3.14(0.08)	0.000
It is inevitable that we sacrifice our own ability of farm when achieving economic growth in Korea.		0.56		25.0/63.7	3.19(0.09)	10.2/87.7	2.0(0.07)	0.000
Factor 3: Direct marketing (Eigen value: 1.59, Cronbach coefficient alpha: 0.63)								
Government should promote direct market policies.			0.69	90.2/1.7	5.91(0.05)	95.5/1.1	6.29(0.04)	0.000
There are too many middlemen between farm and fork in Korea.			0.68	86.5/5.9	5.77(0.06)	97.2/1.3	6.27(0.04)	0.000
Excessive profits of middlemen threaten small scale farms in Korea.			0.64	89.2/0.8	5.87(0.05)	97.7/0.7	6.22(0.04)	0.000

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] Significant difference between two consumer groups for t-test (P<0.005)

Factors associated consumer attitudes towards food safety policies (factor one)

Conventional consumers in this study were associated with a positive mean value (0.34) of factor one scores while member consumers had a negative mean value (-0.28) suggesting that member consumers were much more critical of existing government food safety policies (Figure 4.1).

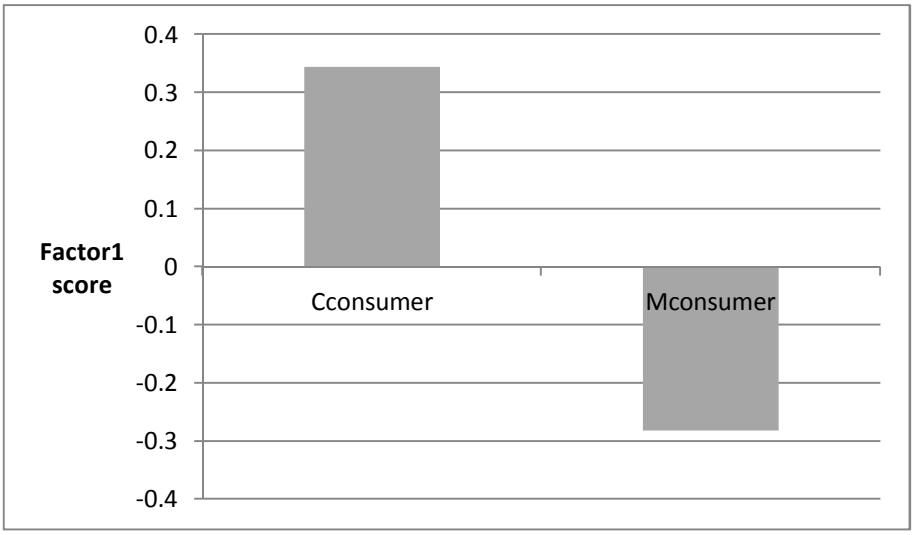

Figure 4.1: Mean of factor one scores for conventional consumers and member consumers

Although consumers as a whole were generally critical of government policies around food, member consumers were much more likely to be critical. Thus 12.0% of conventional consumers agreed that the Korean government was adequately managing food safety and 18.4% agreed that trusted the safety of food, unlike 2.9% and 3.8% of the member consumers, respectively (Table 4.9)

In general both conventional and member consumers were highly supportive of direct marketing and of eliminating the distance between farm and fork, although

member consumers significantly ($p<0.0001$) more so than their conventional counterparts.

Regression analysis was used to identify factors that might help explain any differences in consumer attitudes regarding food safety policies, agricultural industrialization, and direct marketing. Nine independent variables (Table 4.10) were used to calculate Akaike's Information Criterion (AIC) for each factor (Table 4.12). Twenty candidate models were generated that would help explain consumer attitudes towards governmental food safety policies (Table 4.11). The best model resulting in a ΔAIC_c value of 0 included four independent variables: age, financial status, family size, and membership status. Four models (As ΔAIC_c value<2) suggest substantial evidence for the models for factor one.

Table 4.10: Explanatory variables in developing the candidate models to examine two consumer attitudes towards governmental food safety policies (factor one)

Abbreviation	Variable
Age	Age of respondent
Education	Highest level of education of respondent, which ranged from level 1(no high school) to level 5 (university degree)
Familysize	Size of family
Financialstatus	Financial situation of respondent, which ranged from level 1 (not enough financial resources) to level 5 (more than enough financial resources)
Foodexpenditure	Percentage of income spending for food in last month
Gender	Gender of respondent (male, female)
Income	Annual income of respondent, which income ranged from level 1 (less $ 6 999) to level 6 ($60 000 or more).
Membership	Membership of consumer cooperatives (yes, no)
nChildren	Number of children

Table 4.11: Selected candidate models explaining consumer attitudes towards governmental food safety policies

Model	Log(L)	K	AIC_c	ΔAIC_c	AIC_{cw}
Age+Financialstatus+Familysize+Membership	454.012	5	464.012	**0.0**	0.199
Age+Financialstatus+Membership	456.08	4	464.08	**0.1**	0.193
Age+Membership	458.986	3	464.986	**1.0**	0.122
Age+Financialstatus+Education+Familysize+ Membership	453.741	6	465.741	**1.7**	0.084
Age+Financialstatus+Income+Membership	456.039	5	466.039	2.0	0.072
Age+Income+Membership	458.382	4	466.382	2.4	0.061
Age+Foodexpenditure+Membership	458.676	4	466.676	2.7	0.053
Age+nchildren+Membership	458.88	4	466.88	2.9	0.047
Age+Education+Membership	458.888	4	466.888	2.9	0.047
Financialstatus+Membership	460.891	3	466.891	2.9	0.047
Age*Age+Membership	459.588	4	467.588	3.6	0.033
Income+nchildren+Membership	461.422	4	469.422	5.4	0.013
Age*Age+Education+Membership	459.504	5	469.504	5.5	0.013
Age+Financialstatus+Income+Education+n children+Gender+Membership	455.364	8	471.364	7.4	0.005
Foodexpenditure+Gender+Membership	463.54	4	471.54	7.5	0.005
Age+Financialstatus+Income+Foodexpenditure+Education+n children+Familysize+Gender+Membership	452.183	10	472.183	8.2	0.003
Age+Financialstatus+Income+Foodexpenditure+Education+n children+Gender+Membership	455.297	9	473.297	9.3	0.002
Age*Membership+Financialstatus+Income	479.669	5	489.669	25.7	0.000
Age+Financialstatus+Income+Foodexpenditure+Education+n children+Familysize+Gender	490.221	9	508.221	44.2	0.000
Age+Financialstatus+Income	511.194	4	519.194	55.2	0.000

Membership status of respondents was the most important demographic characteristic influencing consumer attitudes towards food safety policies, followed in descending order of relative importance by age, financial status, and family size. In contrast, number of children, education, income, gender, and food expenditure variables had much less influence on consumer attitudes (Table 4.12).

Important demographic variables influencing two consumer groups were different. Age was the most important variables influencing conventional consumer attitudes, followed in descending order of relative importance by food expenditure,

income, and financial status whereas family size, and education variables were less important variables. Although age was also the most important variable influencing member consumer perceptions, it was followed in descending order of relative importance by income and gender. In contrast, financial status and food expenditure variables were less important variables for member consumers (Table 4.12).

Table 4.12: Cumulative Akaike weight for nine independent variables to influence consumers' perception regarding food safety policies (Factor 1)

Variable	Combined		Conventional consumer		Member consumer	
	AIC[a]	Rank	AIC[a]	Rank	AIC[a]	Rank
Membership	1.00	1	-	-	-	-
Age	0.75	2	0.55	1	0.81	1
Financial status	0.58	3	0.34	4	0.28	7
Family size	0.53	4	0.29	7	0.29	6
No of children	0.33	5	0.33	5	0.32	4
Education	0.30	6	0.27	8	0.30	5
Income	0.29	7	0.39	3	0.36	2
Gender	0.29	8	0.30	6	0.34	3
Food expenditure	0.28	9	0.52	2	0.27	8

[a] Cumulative Akaike weight is the percent of weight attributable to models containing that particular variable and is calculated by summing theAICc model weights of every model containing that variable.

As indicated above, consumer attitudes towards government food safety policies were very negative for both groups but especially at younger ages (Figure 4.2). Thus, 50 and 60 years old had the most positive attitude towards government food safety policies for both conventional and member consumers.

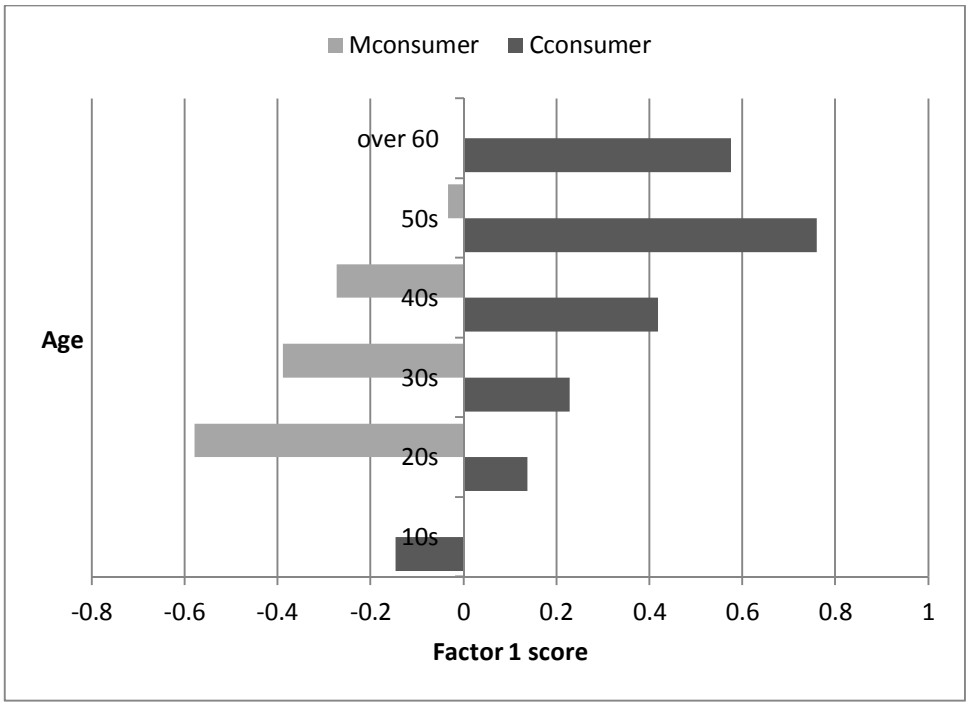

Figure 4.2: Mean of factor one score with age for conventional and member consumers as related to factor one (government policies on food safety)

Factors underlying consumer attitudes towards agricultural industrialization (factor two) and direct marketing (factor three)

Conventional consumers in this study were associated with positive mean values (0.41) of factor two scores whereas member consumers had negative mean values (-0.34) indicating that member consumers were generally much more critical of agricultural industrialization than conventional consumers (Figure 4.3).

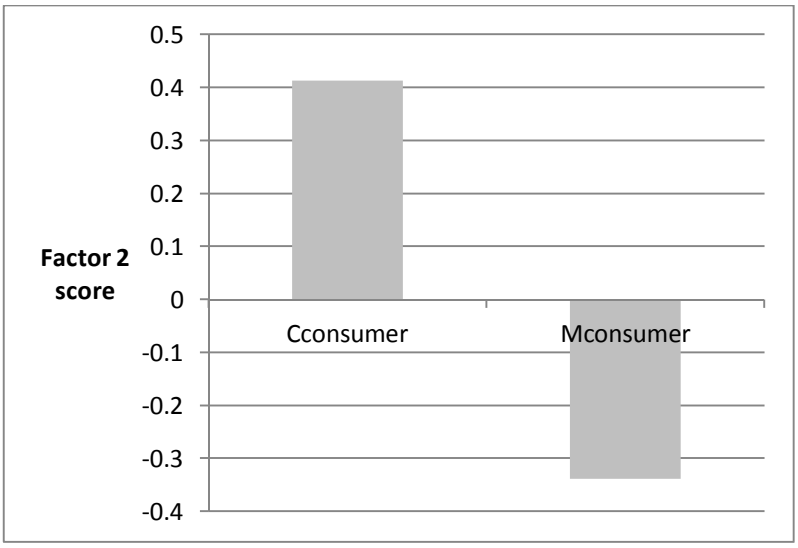

Figure 4.3: Mean of factor two scores for conventional consumers and member consumers (agricultural industrialization)

Nine independent variables were used to calculate Akaike's Information Criterion (AIC) for factor two (Table 4.13). Nineteen candidate models were calculated that would help explain consumer attitudes towards agricultural industrialization. The best model resulting in a ΔAIC_c value of 0 included two independent variables: education and membership status. Six models (ΔAIC_c value<2) suggest substantial evidence exists for these models.

Table 4.13: Selected candidate models explaining consumer attitudes towards agricultural industrialization (Factor 2)

Model	Log(L)	K	AIC_c	ΔAIC_c	AIC_{cw}
Education+Membership	434.298	3	440.298	**0.0**	0.18409
Income+Education+Membership	433.274	4	441.274	**1.0**	0.113
Education+Gender+Membership	433.308	4	441.308	**1.0**	0.1111
Education+Familsizey+Membership	433.415	4	441.415	**1.1**	0.10531
Financialstatus+Education+Membership	434.087	4	442.087	**1.8**	0.07526
Age+Education+Membership	434.237	4	442.237	**1.9**	0.06982
Education*Education+Familysize+Membership	432.309	5	442.309	2.0	0.06735
Income+Education+Gender+Membership	432.594	5	442.594	2.3	0.05841
Income+Education+n children+Membership	433.222	5	443.222	2.9	0.04267
Age+Income+Education+Membership	433.255	5	443.255	3.0	0.04197
Education+Familysize+Membership*Membership	433.415	5	443.415	3.1	0.03874
Income+Education+nchildren+Gender+Membership	432.567	6	444.567	4.3	0.02178
Financialstatus+Income+Education+Gender+Membership	432.588	6	444.588	4.3	0.02155
Income+Education+nchildren+Familysize+Gender+Membership	430.628	7	444.628	4.3	0.02112
Income+Education*Membership	437.51	4	445.51	5.2	0.01359
Income+Foodexpenditure+Education+nchildren+Familysize+Gender+Membership	430.613	8	446.613	6.3	0.00783
Age+Income+Foodexpenditure+Education+nchildren+Familysize+Gender+Membership	430.607	9	448.607	8.3	0.00289
Financialstatus+Membership	442.955	3	448.955	8.7	0.00243
Age+Financialstatus+Income+Foodexpenditure+Education+nchildren+Familysize+Gender+Membership	430.571	10	450.571	10.3	0.00108

Membership status of respondents was again the most important demographic characteristic influencing consumer attitudes, followed in descending order of relative importance, by education, family size, income and gender. In contrast, number of children, food expenditure, age, and financial status variables had much less influence on consumer perceptions (Table 4.14). Yet the demographic variables influencing two farmers groups were again different. Financial status was the most important variables influencing conventional consumer attitudes towards agricultural industrialization,

followed in descending order of relative importance by gender, income, and education. Family size, food expenditure, number of children, and age variables were less important. In contrast, education was the most important variables influencing member consumer attitudes, followed in descending order of relative importance by income, food expenditure, and age. Meanwhile, gender, number of children, family size, and financial status variables were less important for member consumers (Table 4.14).

Table 4.14: Cumulative Akaike weight for nine independent variables to influence consumers' perception regarding agricultural industrialization (Factor 2)

Variable	Combined		Conventional consumer		Member consumer	
	AIC[a]	Rank	AIC[a]	Rank	AIC[a]	Rank
Membership	1.00	1	-	-	-	-
Education	0.97	2	0.37	4	0.81	1
Family size	0.40	3	0.30	5	0.28	7
Income	0.37	4	0.59	3	0.51	2
Gender	0.36	5	0.60	2	0.46	5
Number of children	0.29	6	0.28	7	0.32	6
Food expenditure	0.28	7	0.30	6	0.49	3
Age	0.27	8	0.27	8	0.47	4
Financial status	0.27	9	0.97	1	0.27	8

[a] Cumulative Akaike weight is the percent of weight attributable to models containing that particular variable and is calculated by summing the AICc model weights of every model containing that variable.

Regarding formal education, participants from both consumer groups with college degree (level 4) or high school (level 3) had more positive attitudes towards agricultural industrialization than those with no high school, or those with university, and graduate education. Member consumers with graduate degree were the most

critical of whereas conventional consumers with some high school education level were the most positive about agricultural industrialization (Figure 4.4). This seemed to be especially true for member consumers

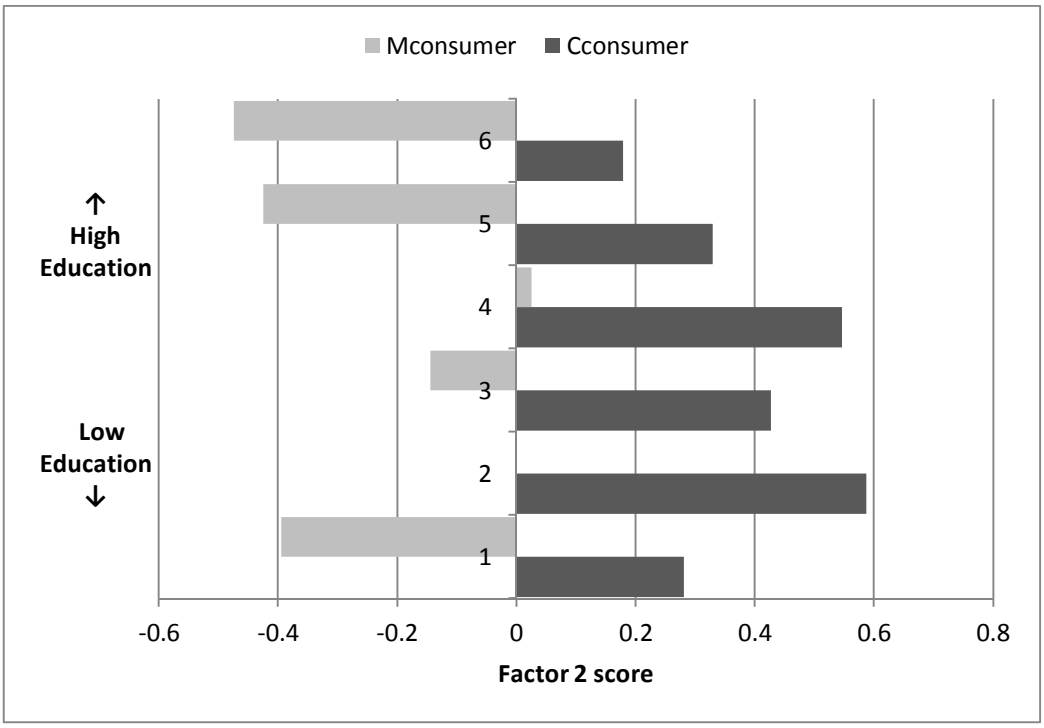

Figure 4.4: Mean of factor two score with education level for conventional and member consumers
Note: education levels ranged from level 1(no high school) to level 5 (university degree)

Conventional consumers in this study were associated with negative mean values (-0.03) of factor three scores whereas member consumers had positive mean values (-0.07) indicating that conventional consumers were generally much more critical of direct marketing than member consumers (Figure 4.5).

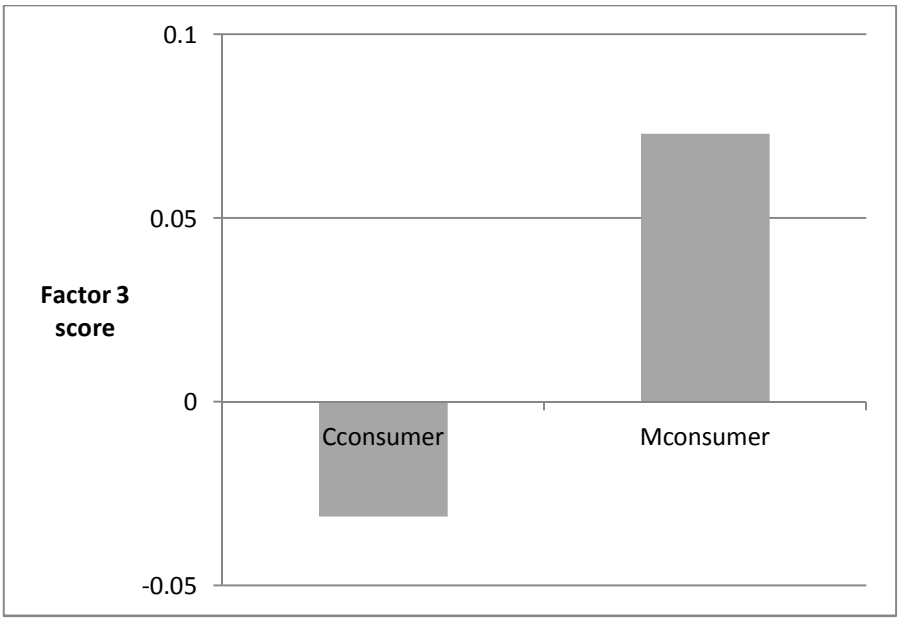

Figure 4.5: Mean of factor three scores for conventional consumers and member consumers (direct marketing)

Participants from both consumer groups with graduate degrees (level 6) or no high school (level 1) had more negative attitudes towards direct marketing than those with university, college, high school, and some high school education. Conventional consumers with graduate degrees were the most critical whereas conventional consumers with college education were the most positive about direct marketing (Figure 4.6).

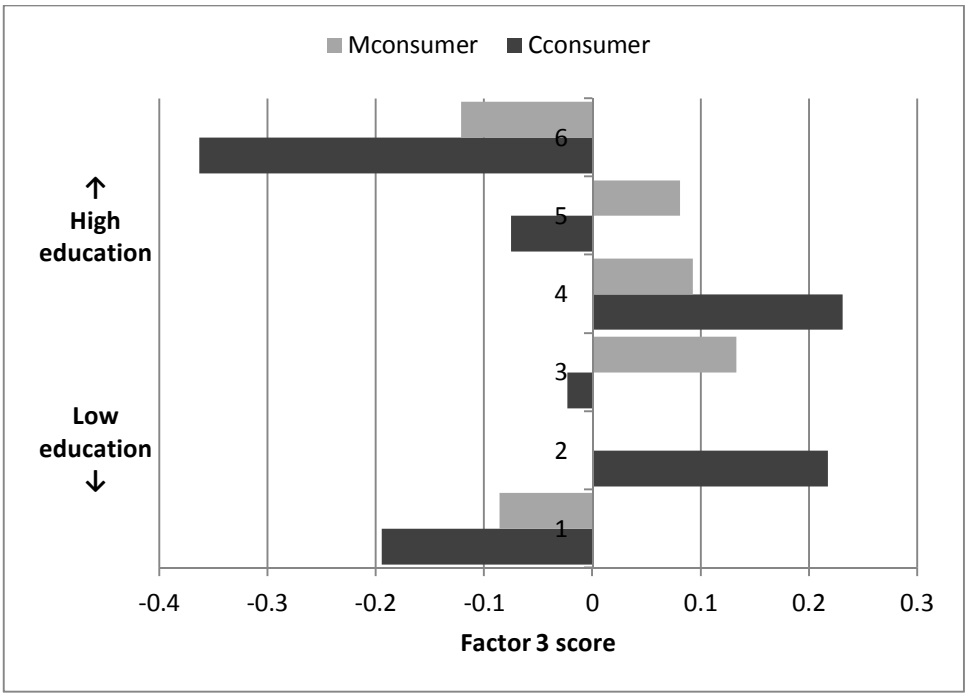

Figure 4.6: Mean of factor three score with education level for conventional and member consumers
Note: education levels ranged from level 1(no high school) to level 5 (university degree)

4.3.4. Local food systems; public responses to rural concerns

Definition of local

Since the term "local" was introduced in Korea in early 2000, discourse regarding the meaning of the term has continued. Regarding spatial definitions, conventional consumers in this study identified local as referring to a very small area; indeed, 28.5% selected local to mean 'my hometown' and 24.1% to mean 'including the adjacent town to my hometown' (Table 4.15). Only 17% perceived local to mean 'country'. In contrast, member consumers identified local with larger area; thus 24.1% of member consumers identified local to mean the 'country as a whole', 23.9% selected 'including the adjacent town to my hometown', and 21.5% selected

'including the adjacent province to my own province'. Only 16.8% referred to 'my hometown' (Table 4.15).

Table 4.15: Spatial dimensions of the term 'local'

Spatial dimension	Conventional consumer		Member consumer	
	Proportion (%)	Rank	Proportion (%)	Rank
Hometown	28.5	1	16.8	4
Adjacent town to your own	24.1	2	23.9	2
Country	17.0	3	24.1	1
Province	15.6	4	12.1	5
Adjacent province to your own	12.4	5	21.5	3

There was similar disagreement among the stakeholders. The representative of the farmer organizations defined the province as the relevant scale for local.

> *"We did not have public consensus about local. I think the geographical definition of local is confined to the province."*
>
> *(Kyung-san Hwang Kim: Korean Women Peasant Association)*

In contrast, the representative for Happy-Centre cooperatives indicated that the term referred to the whole nation due to Korea's small land area and high degree of urbanization.

> *"The discussion about local food system in Korea began in 2004. The definition of local differs in each country. In Korea, the whole area of the nation is local."*
>
> *(Youn-Soon Kim: Happy-Centre Cooperatives)*

Consumer perceptions of local foods

Generally speaking, the term "local" resonated strongly with consumers. Thus, 76.9% of conventional consumers and an ever higher 93.8% of member consumers at least somewhat agreed that 'buying locally produced foods is an important way to support small-scale farmers' (Table 4.16). However, the results of this study revealed attitudes still differed substantially between the two consumer groups. 51.9% of member consumers agreed that 'local foods are produced using environmentally sustainable farming practices' whereas only 27.0% of conventional consumers agreed. Also, 47.5% of conventional consumers identified that 'local food is generally too expensive whereas only 27.6% of member consumers agreed. As a result, only 46% of conventional consumers but a higher 69.9% of member consumers responded positively to the statement that 'I like to buy locally produced food'. This reflected differences in food purchase behaviour, since member consumers usually buy locally produced organic foods.

> *"I purchase Korean beef at consumer cooperatives and do not purchase any meat sold at large retailer markets"*
>
> *(Happy-Centre, member consumer #61)*

Although consumers appeared to have at least some negative attitudes toward local food, 65% of conventional and a very high 93.8% of member consumers concurred that concerns over food safety have increased their interest in local foods, indicating that imported food might represent even greater risks.

Table 4.16: Consumer perceptions of local foods

Question	Conventional		Member		Sig(2-tailed)[c]
	Mean[a] (SE)	-/+ (%)[b]	Mean[a] (SE)	-/+ (%)[b]	
I like to buy locally produced foods.	4.48 (0.07)	22.1/46.0	4.95 (0.07)	15.5/69.9	0.000
Local foods are produced using environmentally sustainable farming practices.	3.82 (0.07)	32.6/27.0	4.42 (0.08)	31.2/51.9	0.000
Buying locally produced foods is an important way to support small scale farmers.	5.41 (0.06)	6.0/76.9	6.1 (0.04)	3.3/93.8	0.000
Concern over food safety has increased my interest in local foods.	5.1 (0.06)	9.1/65.0	5.92 (0.05)	1.3/88.5	0.000
Local food is generally too expensive.	4.42 (0.07)	17.8/47.5	3.51 (0.07)	46.4/27.6	0.000

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] Significant difference between two consumer groups for t-test ($P<0.005$)

Building local food systems in Korea

Building an efficient and effective distribution system that adequately links farmers to consumers is of great importance when it comes to developing alternative food systems in Korea. Indeed, 63.5% of conventional consumers and 79.8% of member consumers agreed that it was important to develop alternatives to the global agri-food system (Table 4.17).

Table 4.17: Conventional and member consumer attitudes towards alternatives to the global agri-food system

Response	Conventional consumer		Member consumer	
	Frequency [a]	%	Frequency [a]	%
Important to me	255	62.0	361	79.9
Not important to me	50	12.2	18	4.0
Missing	106	25.8	73	16.2

[a] Frequency of answer the question 'is it important to develop alternatives to the global agri-food system?'

In Korea, people and thus economic influence are largely restricted to metropolitan areas including Seoul city and Gyeonggi province. Stakeholders indicated food distribution systems and transportation facilities have developed around these urban centers, especially Seoul. For these reasons, stakeholders advised that transportation costs centred on Seoul are much less expensive than developing direct connections in other less densely populated regions of the country. This may represent a substantial barrier to the development of local food systems across Korea.

> *"In Korea, as 50% of population is living in metropolitan areas, the distribution system is centralized in Seoul. As a matter of fact, distribution costs from rural to rural are more expensive than those via Seoul."*
>
> *(Geun-Haeng Lee: Hansalim)*

Stakeholders argued that the wholesale market system that has developed in Korea and Japan represents another barrier to building local food systems because about half of Korean agricultural products are transported to the wholesale markets that are located in Seoul and only then distributed outwards to smaller markets.

> *"Japan and Korea have a wholesale market system that was useful when means of communication were underdeveloped. In the past, local products were gathered in Seoul for pricing and then distributed to local markets. Currently, the wholesale market system has become a barrier to building local food systems."*
>
> *(Eun-Mee Jeong: KREI)*

Considering these circumstances, some stakeholders suggested that Gyeonggi province might also become a feasible area to develop local food systems because large cities and rural communities are adjacent to one another and because the population (10 million people) in Gyeonggi province is large enough to support such a system.

> *"If we focus on space, local food systems mean that the system of production and consumer are located in one region. It is possible to build the system around Gyeonggi-do, or any region where a large city is located near rural communities."*
>
> *(Min-Sun Park: Agricultural Cooperative Collage)*

Safety concerns and local foods

Stakeholders in this study agreed that the government is currently unable to adequately protect food safety, as represented by the global agri-food system. In this respect, local food systems were considered to be important alternatives. As identified above, however, many tangible difficulties undermine the development of local food systems as alternatives in Korea. Therefore, activists and experts insisted that consumer behaviour and consumer movements, and their overriding concern about food safety, have played and will continue to play an essential role in the development

of these systems. It seemed that if consumers are willing to pay for local foods regardless of price, they can simultaneously change the food system and protect safety.

> *"There is a limit to the roles that the government can play. Because it takes 5-6 months from farms to markets via importation, governments cannot inspect the whole production process. Actually, the most important things are the roles of farmers and distributors. However, do we trust them? Their purpose is pursuing profits. Therefore, consumers have to seek trustworthy farmers and distributors. Consumers should lead these initiatives and willingly pay for the cost."*
>
> *(Eun-Mee Jeong: KREI)*

But rather than doing so as individuals, it is much more productive to work for change as groups of consumers working towards common ends.

> *"... consumer awareness and attitudes toward foods are important. I don't think the solution is to criticize the transnational food industry. Rather, members of society that include individuals, communities, regions, have to work together to create solutions for food safety."*
>
> *(Geun-Haeng Lee: Hansalim)*

Food self-sufficiency and local food system

Some stakeholders recognized that local food systems were already established, but they also felt it was not possible to improve already low levels of food self-sufficiency in Korea due to absolute restrictions in land area and the current high age of farmers.

> *"It is not practical to insist on local food systems in Korea because food self-sufficiency is below 50%. Local food systems cannot solve low food self-sufficiency."*
>
> *(Eun-Mee Jeong: KREI)*

As suggested by one of the consumer cooperative stakeholders, if Koreans expanded the geographic bounds of local food system to include both South and North Korea, food self-sufficiency might be increased. In the past, North and South Korea cooperated and traded over long periods of time, which could now be exploited to take advantage of differences in growing conditions.

> *"I define local as our country including North Korea. Southern parts of Korea have huge fields, warm weather, and abundant precipitation. Therefore, the southern area is appropriate for rice cultivation. It is almost all mountainous areas in northern Korea. As weather is cold and precipitation is low, North Korea produces other grains than rice. Historically, Koreans were used to trade agricultural products between the north and south. I believe this represents a possibility to raise food self-sufficiency."*
>
> *(Won-Gak Jung: iCoop)*

However, there are currently and obviously serious political barriers to be considered before such integrated systems could be initiated.

Many survey respondents and stakeholders were generally worried about the very low existing food self-sufficiency in Korea. They perceived that achieving complete food self-sufficiency was unrealistic; yet, they recognized there as a need to raise food self-sufficiency from existing levels. Stakeholders insisted that consumer cooperatives movement and government policies that support local food systems are important frames for the substantive solutions that might address low food self-sufficiency in Korea.

> *"Currently, we consume many kinds of foods and large amount foods. Therefore, it is nonsense that we achieve complete food self-sufficiency in Korea. We are facing two contradictory situations. Large arable land is being converted to industrial use on one hand, but it is very important to*

raise food self-sufficiency on the other hand. I think this is the roles of consumer cooperatives and local food systems."

(Geun-Haeng Lee: Hansalim)

4.4. Discussion

Overall, food self-sufficiency (grain including livestock feed) in Korea was 22.9% in 2012, a number that has declined from 29.7% in 2000 and 49.2% in 1985 (Choi et al., 2010; Hwang, 2013). While 92.4% of conventional and member farmers in this study agreed that low food self-sufficiency is an important issue (Chapter 5), only 56.4% of conventional consumers agreed. Since Korea had achieved almost 100% rice self-sufficiency by 2010, it seems that most consumers are either unaware of the importance of food self-sufficiency or assume that this is also true for other agricultural products. However, recent and severe climate change and food price volatility as well as concerns over the safety of imported food have sensitized the Korean public to food self-sufficiency as an issue.

With the exception of rice, Korea imports 72.9% of its food grains, and thus international high food prices directly influence Korean food markets. Indeed, when international corn and wheat prices doubled in 2008 (Headey, 2011), surges in the prices of food items made from corn and wheat became a critical social issue in Korea. In addition, major international food companies such as Cargill, ADM, Louis Dreyfus, and Bunge, offered higher-priced corn and wheat to Korea than the international market prices during 2006-2008 (Lee et al., 2009). Although the international rice price tripled over that same period, domestic rice prices were stabilized because of rice self-sufficiency in Korea. Therefore, increasing food self-sufficiency rates and

improving of local and regional food distribution systems are crucial goals for Korean food policy.

Most consumers in this study perceived that increasing food self-sufficiency is important; however, 68.6% of conventional consumers and 37.8% of member consumers were unable to suggest the solutions for low food self-sufficiency (Table 4.6). Regarding low rates of food self-sufficiency, both two consumer groups were highly critical of inadequate government policies; however, member consumers also attributed low rates to global issues including the commercialization of agriculture, climate change, and the WTO whereas conventional consumers focused domestic rural issues such as geography and rural depopulation (Table 4.7). These differences in attitude between the two consumer groups reflect the diverse programs held by the consumer cooperatives that educate their members about the importance of sustainable agricultural and food policies and the larger factors that underlie these concerns.

Although many participants recognized the importance of food self-sufficiency, it was also seen as unrealistic as an absolute goal. Korea has the third highest population density in the world, behind Bangladesh and Taiwan and 63.9% of the country is mountainous (Korea Forest Service, 2015). Therefore, food activists and some consumers are concerned about ongoing and continuous declines in food self-sufficiency. However, the Korean government always accounts for these declines by arguing that supporting agricultural productivity and rural communities violates WTO regulations on one hand and the many other existing or future potential FTAs on the other hand. In this respect, WTO regulations regarding trade restriction remained in effect during and after the international food crisis that occurred from 2007 to 2008. During these period, Vietnam, Cambodia, India, and Egypt all placed restrictions on

rice exports whereas the Ukraine, Argentina, Russia, and Kazakhstan all banned wheat exports (Headey & Fan, 2010). Therefore, food-aware consumers and activists suggest that the government should promote goals of food self-sufficiency to prevent any additional decline in domestic agriculture, especially regarding other staple foods.

Differences in attitude between conventional and member consumers towards agriculture and food issues were observed throughout this study. They had different solutions for low food self-sufficiency, agricultural industrialization, and for promoting local foods. These also reflected the information and proactive education programs provided by consumer cooperatives for their members. Indeed, member consumers were likely to convey principles of citizenship in their food practices, including political participation, universal human rights and equity in society, and membership in political communities (Cohen, 1999). In this respect, member consumers actively expressed their opinions and participated in political decision-making through strong support for their consumer cooperatives and by joining collective social actions. Furthermore, outcomes indicated that member consumers supported rural communities and farmers. Reflecting their members' opinions, Korean consumer cooperatives launched funds that would help stabilize prices and the pre-purchase of domestic grains in order to stabilize production and to reduce farmer debt incurred during the planting period.

However, the total number of member consumers shares is still small (4.0% of all households in Korea) and these large numbers of conventional consumers remain unaware of agriculture and food-related concerns. Recently, as critical food issues occurred (i.e. the referendum regarding the adoption of free school lunch programmes, the Fukushima nuclear accident, and chronic epidemics of livestock infectious disease

including avian influenza and foot-and-mouth disease), conventional consumers have become increasingly concerned about food. Yet, they still had ambivalent attitudes towards domestic agriculture, and while they were more likely to trust locally produced foods, they were still less willing to pay the higher prices for these products.

The Korean government has adopted low wage and low food price policies in order to support labour intensive industrial economic growth since the 1970s. Although such policies have helped generate rapid economic growth, the Korean public now expects food prices to be and to remain low. These expectations are commonplace, and indeed, are arguably a defining feature of the global agri-food system (Lee, 2012a).

Yet, an effective approach exists that can be used to address such expectations in ways that are consistent with alternative food systems: the reduction of distribution costs that in turn would lower market prices of domestic foods. Over 90% of all surveyed consumers agreed that this might be achieved by building direct-market systems and by eliminating many of the needless middlemen that often make excessive profits. The distribution margin currently represents 20-70% of food prices in Korea (Jeon et al., 2009). The public thus needs to demand that the government shorten these distribution chains. Increasing the proportion of food costs that consumers pay to farmers would also increase farmer incomes and increase the attractiveness of farming as a livelihood for future generations.

The concept of local food has increased in popularity in Korea over the last 10 years. Yet there has been no consensus in the definition of the term ‘local’ over this time period. Consumers in this study generally regarded ‘local’ as referring to the geographic distance from production to consumption. Yet participants referred to

many different scales, although conventional consumers seemed to prefer smaller scale definitions. Although indicating that the term should operate at the national scale, stakeholders also argued that 'local' was much more than geographical distance and that it connoted social relationships between farmers and consumers that also emphasized the importance of trust, communication, and cooperation. These differences in opinion reflected socio-demographic distinctions in Korea; over half of total population lives in densely populated metropolitan areas including Seoul and Gyeonggi province. Moreover, rural areas are mostly located in southern part of the country. Therefore, farmers are generally required to sell their products to consumers living-in relatively distant northern parts of the country. Regional direct marketing systems are needed to build linkages between consumers and farmers across these distances. Yet, much infrastructure needs to be established to facilitate these changes. Building an adequate strategy for promoting and supporting domestic production needs to be implemented prior to establishing local food systems. In turn, operators of regional direct markets need to organize farmers who are willing to sell their agricultural products through local food systems and, then, to develop and manage appropriate food quality and safety standards, most of these centered on environmentally sustainable or low chemical-input farming practices seen as important by most consumers. In addition, farmers participating in local food systems would need to apply multi-cropping agronomic practices to reflect the diverse requirements of consumers.

Some stakeholders in this study advised that the key for raising food self-sufficiency is increasing and organizing consumer demand for domestic foods (Si et al., 2015). One of largest food demands in Korea is reflected by institutional food

services such as the free school lunch program. The program recently became a contentious political issue in Korea and was adopted through a public referendum and mayoral election in Seoul in 2012. Several provincial governments (e.g. Gyeonggi-do, Chungcheongnam-do, and Jeollanam-do) decided that free school lunch centres should only use domestically produced organic products (Gook, 2012). The Seoul metropolitan government also founded an environment-friendly foods provisioning centre in 2010. This centre provides direct contracts with farmers groups in a nationwide effort to shorten distribution chains. This policy has at once helped reduce distribution costs, lowered food prices, increased support and market demand for small-scale farm products, and expanded environmentally sound farming across the country (Song, 2012). Proponents of local food systems including staff in school lunch centres and activists in agri-food movement organizations are now considering the expansion of this environment-friendly foods provisioning system to other public sectors including daycares, nursing homes, and hospitals. These expanded food policies and procurement practices will increase demands for domestic foods and, in turn, raise the rate of food self-sufficiency in Korea.

4.5. Conclusions

This study explored consumer attitudes towards food self-sufficiency policies and local food systems. Additionally, this study compared conventional consumer and member consumer attitudes towards agriculture and food issues such as food safety policies, agricultural industrialization, and direct market. The WTO Doha Development Agenda included agricultural and regulated government interventions regarding food production and international trade. However, these were less

applicable to least developed countries and countries with low rate of food self-sufficiency. As agriculture and food are influenced by complicated social and political dimensions, the WTO system enforcing free trade policy has thus far been unable to govern international agriculture.

Korea and Japan have experienced significant declines in domestic agriculture and food self-sufficiency. However, large-scale consumer cooperatives in these two countries have created effective distribution systems for domestically produced organic foods and have thus contributed substantially to food self-sufficiency and have helped address widespread food safety concerns. Member consumers of Korean consumer cooperatives actively joined in collective actions agitating for food safety. Consumer willingness to pay fair prices is the most important way of supporting Korean rural communities and agriculture. In this regard, various education programs provided by consumer cooperatives play meaningful roles for increasing consumer awareness about equity in the food system.

Local food movements in Korea confront various social and geographical issues. The country's small land area as well as widely varying population density and urbanization are major barriers that undermine the development of local food systems. Nevertheless, building regional and small-scale food systems is required to reduce distribution costs and increase farmer incomes. Activists and experts insisted increased consumer awareness of these issues would prompt the Korean government to adopt policies surrounding food self-sufficiency and the shortening of distribution distances of food.

References

Allen, P. & Wilson, A. (2008). Agrifood inequalities: Globalization and localization. *Development,* 51(4), 534-540.

Amid, J. (2007). The dilemma of cheap food and self-sufficiency: The ease of wheat in Iran. *Food Policy*, 32(4), 537-552.

Arsil, P., Li, E. & Bruwer, J. (2014). Perspectives on consumer perceptions of local foods: A view from Indonesia. *Journal of International Food & Agribusiness Marketing*, 26(2), 107-124.

Bae, M. (2014). *Index and task of food self-sufficiency*. Seoul: National Assembly Research Service. [In Korean]

Bishop, T., Reinke, J. & Adams, T. (2011). Globalization: Trends and perspective. *Journal of International Business Research*, 10(1), 117-130.

Borras, S.M., Kay, C., Gómez, S., & Wilkinson, J. (2012). Land grabbing and global capitalist accumulation: Key features in Latin America. *Canadian Journal of Development Studies*, 33(4), 402-416.

Boyer, J. (2010). Food security, food sovereignty, and local challenges for transnational agrarian movements: The Honduras case. *Journal of Peasant Studies,* 37(2), 319-351.

Brook, R, K. & McLachlan, S. M. (2006). Factors influencing farmers' concerns associated with bovine tuberculosis in wildlife and livestock around Riding Mountain National Park. *Journal of Environmental Management*, 80(2), 156-166.

Brown, C. & Miller, S. (2008). The impact of local markets: A review of research on farmers markets and community supported agriculture (CSA). *American Journal of Agricultural Economics.* 90(5), 1296-1302.

Burnham, K. & Anderson, D. (2002). *Model selection and multimodel inference: A practical information-theoretic approach* (2nd Edition). Springer: New York.

Chang, H-J. (2009). *Rethinking Public Policy in Agriculture: Lessons from distant and recent history.* Rome: FAO.

Choi, J., Woo, B. & Hwang, Y. (2010). *A study on conceptualization of food self-sufficiency rate and re-establishing its target in Korea*. Seoul: Korea Rural Economic Institute. [In Korean]

Cohen, J. L. (1999). Changing paradigms of citizenship and the exclusiveness of the demos. *International sociology*, 14(3), 245-268.

Farmers Market Canada. (2009). The National Farmers' Market Impact Study 2009 Report. Retrieved from http://www.farmersmarketscanada.ca/Upload/file/FMC%20FINAL%20Brochure%202009-ENG.pdf

FAO. (2003). *Trade reforms and food security: Conceptualizing the linkage*, Rome: FAO.

FAO. (2011). *The state of food insecurity in the world, 2011*. Rome: FAO.

Feagan, R. & Henderson, A. (2009). Devon Acres CSA: Local struggles in a global food system. *Agriculture and Human Values,* 26(3), 203-217.

Feagan, R., Morris, D. & Krug, K. (2004). Niagara region farmers' markets: local food systems and sustainability considerations. *Local Environment*, 9(3), 235-254.

Fonte, M. (2008). Knowledge, food and place. A way of producing, a way of knowing. *Sociologia Ruralis*, 48(3), 200-222.

Gao, S. (2010). Discussion on issues of food security based on basic domesic self-sufficiency. *Asian social Science*, 6(11), 42-48.

Gook, S. (2012). *Investigation of school food supply systems and improvement plan.* Seoul: KREI Focus on Agricultural Policies, 24. [In Korean]

Han, S., Park, Y., Seo, G., Yoon, Y. & Nam, S. (2014). The monthly trend of Agricultural Policies 2014 May. KREI.

Headey, D. & Fan, S. (2010). *Reflections on the global food crisis: How did it happen? How has it hurt? And how can we prevent the next ones?* Washington: International Food Policy Research Institute.

Hinrichs, C. (2003). The practice and politics of food system localization. *Journal of Rural Studies*, 19(1), 33-45.

Hiroshi, I. (1991). Consumer cooperatives in the spotlight. *Japan Quarterly*, 38(4), 429-435.

Holt-Gimenez, E. (2009). From food crisis to food sovereignty: The challenge of social movement. *Monthly Review,* 61(3), 142-156.

Hong, H. (2011). *A mistaken plan to food crisis: Overseas agricultural development.* Seoul: Agriculture and Farmer Policies Institute, Issue Report, 4. [In Korean]

Hwang, Y. (2013). *Food demand and supply*. Seoul: K REI. [In Korean]

Jeon, C., Choi, B., &Kim, D. (2009). *An evaluation of agricultural distribution system and efficiency improvement.* Seoul: KREI. [In Korean]

Jeong, J., Lee, E., Lee, H., Son, I., Lee, S. &Jeong, D. (2011).Characteristics of the price structure and response in South Korea. *CEO Information*, 820. [In Korean]

Kim, C. (2011). Current state and future tasks for Korean local food. *Korean Journal of Sociology*, 12(1), 111-133. [In Korean]

Kim, J. (2007). Revitalizing the Korean agriculture via local food system and its task. *Rural Society*, 17(1), 5-32. [In Korean]

Kim, J., Kim, S. & Jeong, W. (2007). *Perception of the members of Consumer Cooperatives*. Seoul: ICOOP Consumers' Cooperative Institute. [In Korean]

Kim, B., Lee, B., Jeon, I., Yoon, J., & Min, J. (2011). *Project feasibility study of overseas agricultural development*. Seoul: Korea Rural Economic Institute. [In Korean]

Kimura, A. H. &Nishiyama, M. (2008). The chisan-chisho movement: Japanese local food movement and its challenges. *Agriculture and Human Values*, 25(1), 49-64.

Korea Forest Service. (2015). Korea Forest Statistics. Retrieved from http://www.forest.go.kr/newkfsweb/kfs/idx/Index.do?mainType=01

Lee, H. (2012a). *Agriculture in Korea: Solution for hope*. Seoul: Korean Farmer and Fisher Newspaper. [In Korean]

Lee, H. (2012b). *The purpose and plan for increase of food self-sufficiency.* Seoul: Agriculture and Farmer Policies Institute, Issue Report, 103. [In Korean]

Lee, O., Lee, J. & Kim, J. (2009). *An analysis of the international grain market and Korea's alternative grain import strategy.* Seoul: Korea Rural Economic Institute. [In Korean]

Lee, H. (2014). *Soaring and collapsing of food prices: The causes and solutions*. Seoul: iCoop Cooperatives Institute. [In Korean]

Mai, Y. (2008). Removing border protection on wheat and rice: Effects on rural income and food self-sufficiency in China. *The Australian Journal of Agricultural and Resource Economics*, 52(2), 113-131.

Martinez, S., Hand, M., Pra, M., Pollack, S., Ralston, K., Smith, T., Vogel, S., Clack, S., Lohr, L., Low, S., & Newman, C. (2010). *Local Food Systems: Concepts, Impacts, and Issues.* USDA Economic Research Service, ERR-97. Retrieved from http://www.ers.usda.gov/publications/err-economic-research-report/err97.aspx

Matsuki, Y. (2002). *Agri-food supply chain development by various chain leader: Case studies in Japan and new concept of high nature value*. Paper presented at the 13th International Farm Management Congress.

Mears, L. (1984). Rice and food self-sufficiency in Indonesia. *Bulletin of Indonesian Economic Studies,* 20(2), 122-138.

Mechlem, K. (2004). Food security and the right to food in the discourse of the United Nations. *European Law Journal*, 10(5), 631-648.

Moen, D. (2000). Grassroots-based organic foods distributors, retailers, and consumer cooperatives in Japan: Broadening the organic farming movement. *Hitotsubashi journal of social studies*, 32, 55-76.

Moon, H. & Jeon, H. (2012). *Consumer perceptions of Chinese agricultural products.* Seoul: KREI. [In Korean]

Naher, F. (1997). Green revolution in Bangladesh: Production stability and food self-sufficiency. *Economic and Political Weekly*, 32(26), A84-A89.

Nord, M., Andrews, M., &Calson, S. (2009). *Household food security in the United* States, 2008. USDA, Economic Research Service, ERR-83. Retrieved from

http://www.washingtonpost.com/wp-srv/nation/documents/usda_report_household_food_security_2008.pdf

Parker, G. (2005). Sustainable food? Teikei, Cooperatives and food citizenship in Japan and the UK. Working papers in Real Estate &Planning. http://centaur.reading.ac.uk/21289/1/1105.pdf

Rayland, E. & Tropp, D. (2006). National Farmers Matrket Manager Survey. USDA Agrucultural Marketing Service. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5077203&acct=wdmgeninfo

Riethmuller, P. (1994). Recent developments in the Japanese food distribution system. *Food Policy*, 19(6), 517-532.

Selfa, T. & Qazi, J. (2005). Place, taste, or face-to-face? Understanding producer-consumer networks in "local" food systems in Washington State. *Agriculture and Human Values,* 22(4), 451-464.

Sen, S., Russel, N., &Ozanne, A. (2002). Broad- based agricultural development versus food self-sufficiency: A general equilibrium analysis in India. *Journal of Agricultural Economics*, 53(3), 567-588.

Shane, M., Teigen, L., Gehlhar, M. & Roe, T. (2000). Economic growth and world food insecurity: A parametric approach. *Food Policy*, 25(3), 297-315.

Shepherd, B. (2012). Thinking critically about food security. *Security Dialogue*, 43 (3), 195-212.

Si, Z., Schumilas, T. & Scott, S. (2015). Characterizing alternative food networks in China. *Agriculture and Human Values*, 32(2), 299-313.

Song, W. (2012). *Improvement of foods welfare with public food service*. Seoul: Agriculture and Farmer Policy Institute, Issue Report, 111. [In Korean]

Starr, A. (2010). Local food: A social movement? *Cultural Studies Critical Methodologies*, 10(6), 479-490.

Timmer, C. (2005). Food security and economic growth: An Asian perspective. *Asian-Pacific Economic Literature*, 19(1), 1-17.

Yamashita, K. (2006). Food and agriculture problems for Japan and the World in the twenty-first century. *Asian-Pacific Review*, 13(1), 1-15.

Zheng, S., Lambert, D., Wang, S. & Wang, Z. (2013). Effects of agricultural subsidy policies on comparative advantage and production protection in China. *The Chinese Economy*, 46(1), 20-37.

CHAPTER 5

FARMER PERCEPTIONS OF RURAL CONCERNS AND FOOD SYSTEMS IN SOUTH KOREA

ABSTRACTS

Introduction: Over 800,000 Koreans participate in consumer cooperatives, however, little is known about overall farmer attitudes toward the food systems and roles of consumer cooperatives in alleviating food risks and defending food sovereignty in Korea. Even less research has focused on member farmers of consumer cooperatives, who have emerged as the important economic participants in alternative food systems in the country. The overall goal of this chapter was to investigate farmer attitudes and behaviours related to food, and to compare attitudes and behaviours of conventional farmers to those that are members of consumer cooperatives.

Methods: In total, 284 farmer questionnaires were collected in 2009, comprising 166 conventional farmers and 118 member farmers.

Results: Results showed that financial status of farmers was the most important demographic characteristics influencing farmer risk perception, followed by education, age, and food expenditure in declining order of importance. Negative attitudes towards government policies were especially prevalent at low-income levels for both groups and for those who were university-educated. Organic farmers predictably viewed organic agriculture as an effective alternative to industrial large-scale agriculture. Meanwhile, conventional farmers viewed farming approaches that promoted agricultural technical improvements as developed by international agricultural industry as most important. Conventional farmers were more critical of government agricultural policies than member farmers. Member farmers were also more likely to resolve any concerns with consumer cooperatives than their conventional counterparts. Regardless of approach, all Korean farmers in this study showed strong negative attitudes towards the global agri-food system.

Conclusions: Although Korean farmers had little opportunity to access this global market, they were still adversely affected by unstable prices of imported foods. Most were interested in creating alternative food systems in Korea and most agreed that shortening the distance from farm to fork by creating direct market systems was important in achieving these goals.

Keywords: Agricultural policies, conventional farming, food system, Korean farmer perceptions, local food system, organic farming.

5.1. Introduction

Since the 1960s, global agricultural productivity has grown tremendously as facilitated by the Green Revolution and development of agricultural chemical industry (Anderson, 2010; Headey & Fan, 2010). Overproduction of foods in developed countries, which surpasses population growth and capital accumulation, has triggered the emergence of transnational agricultural corporations and facilitated the creation of a global agricultural free trade system (Anderson, 2010; Godfray et al., 2010). The emergence of this transnational agricultural industry has had tremendous influences on agricultural systems around the world (Dixon, 2003). Large transnational retailers now dominate and affect the global food system from food production to consumption (Burch & Lawrence, 2005). On one hand farmers are increasingly losing their control over the methods they use, including crop and seed selection and how much they grow whereas on the other hand, consumers are generally only able to access foods provided by transnational large retailers (Bonanno, 2004; Burch & Lawrence, 2005; Konefal et al., 2005; Friedland, 2004).

New agricultural trade systems governed by the World Trade Organization (WTO) and dominated by the multinational agri-food industry have been launched by developed agricultural countries that are always searching for new food markets for surplus of agri-food products around the world. As facilitated by the introduction of the Green Revolution, proponents have since argued that the global liberalization of agri-trade will reduce food prices and hunger around the world. However, since the late 1990s, a chronic global food crisis that disrupted global food production and consumption has emerged as influenced by severe climate change (Anderson, 2010), high oil prices (McCalla, 2009), the economic growth of China and India (Headey &

Fan, 2010), agricultural speculation of hedge funds (Gilbert & Morgan, 2010), and the rapid increase of bio- fuel production (Hojjat, 2009).

Corresponding changes in agricultural policies have important implications for food security, rural communities, nature and environment, and human health and wellbeing everywhere (Moon, 2011; Wittman et al., 2012). Tarasofsky & Palmer (2006) point out that the WTO has focused on trade liberalization and has thus far been unable to resolve the complicated issues surrounding agriculture, especially as related to the Global South. The WTO has increases the agricultural trade of its member countries by 161% (Grant & Boys, 2012), but it is unclear who benefits. While South Asian countries including India, Sri Lanka, and Bangladesh that have all opened their markets, they still have failed to boost exports of their farm surplus and their food imports have actually increased. This is especially true for post-WTO, India (Ramphul, 2011).

Since the 1990s, polarizing issues have emerged as related to food security in underdeveloped countries and to food safety issues in developed countries. Indeed, the FAO estimates that number of undernourished people reached 842 million in 2013, accounting for 12% of the total population in the world and 14.3% of the population in developing countries (FAO, 2014). Meanwhile, in developed countries, the public has become increasingly concerned about increases in food-related health risks and a highly vocal minority is advocating for alternatives to the global agri-food system (Klonski, 2000). The group concerning food safety argues that intensive and high-input farming contributes to widespread soil degradation and the contamination of the environment (Mzoughi, 2011). To this end, organics has emerged as the most important alternative to conventional agriculture (Seufert et al., 2012).

The market share of organic agriculture has grown four-fold over the last 15 years, from 15.2 billion US$ in 1999 to 63.8 billion US$ in 2012 (FiBL and IFOAM, 2014). Currently there are 1.9 million certified organic farmers around the world and agricultural land dedicated to organics increased from 11million ha in 1999 to 37.5 million ha in 2012 (FiBL and IFOAM, 2014). However, the share of organic agricultural land still only represents 0.87% of total agricultural land use as most farmers are still concerned about low yields and economic risks associated with organics (Darnhofer et al., 2005).

Gaps in yields for organic compared to conventional farming range from 5 to 34% depending on regional characteristics and field conditions (Seufert et al., 2012). However, some recent research showed that sustainable farming methods such as multi-cropping and crop-rotations can help reduce these gaps (Ponisio et al., 2015). Some experts thus suggest that a 'sustainable intensification' approach should become a more inclusive agricultural policy goal (Garnett et al., 2013). Since the Green Revolution, international agricultural policies have generally focused on increasing productivity and have arguably neglected the sustainability of rural communities and the importance of environmental conservation. In contrast, sustainable intensification is an integrative approach, reflecting the importance of yields but also the environment, resources use, rural communities, animal welfare, and human health (Charles et al., 2014). This new holistic agricultural paradigm further embeds sustainable development and supports small-scale farming and farm households within the context of traditional rural cultures (Garnett et al., 2013). Although the sustainable intensification approach needs further development as an approach, the concept already represents a meaningful advance when addressing agricultural decline,

and has important implications for an emerging organic sector in South Korea (herein Korea).

Organic agriculture in Korea has grown remarkably, even relative to the global growth of the sector, and has done so in stark contrast to the general decline of conventional agriculture in the country (Kim et al., 2012). Although the total number of farm households in Korea decreased 6.5%, from 1.23 million in 2007 to 1.15 million in 2012, organic farm households increased 220% over this same period, from 7,507 in 2007 to 16,733 in 2012. Likewise, the total farm area in Korea decreased 2.8%, from 1.78 million ha in 2007 to 1.73 million ha in 2012, but organic farm area increased 260%, from 9,727 ha in 2007 to 25,467 ha in 2012. The number of farmers refusing to apply pesticides also skyrocketed in Korea, increasing almost 300%, from 31,540 in 2007 to 90,325 in 2012 (Jeong & Moon, 2013). Consumer cooperatives have played an essential role in these changes as they provide organic agricultural products to their many member consumers.

Over 800,000 Koreans participate in consumer cooperatives, however, little is known about overall farmer attitudes toward the food systems and roles of consumer cooperatives in alleviating food risks and defending food sovereignty in Korea. Even less research has focused on member farmers of consumer cooperatives, who have emerged as the important economic participants in alternative food systems in the country.

In this chapter, I explore farmer experiences with and attitudes towards the global agri-food system and the fast-growing consumer cooperatives movement in Korea. More specifically, I compared the attitudes between conventional and member farmers towards existing and alternative food systems as well as differences in food-

purchase behaviour and concerns related to food safety and food self-sufficiency within and between these two groups of farmers. These outcomes will help inspire actors who are building alternative food systems and working for social change in Korea and elsewhere in the world.

5.2. Methods

5.2.1. Study area

This study was conducted in South Korea (herein Korea). The total GDP (Gross Domestic Product) of Korea was 832.5 billion USD and population was 48.747 million in 2009 (The World Bank, 2011). Food self-sufficiency for grain including livestock feed continues to drop in Korea from 29.7% in 2000 to 22.9% in 2012 (Hwang, 2013). Korea imported 8.11 million tonnes of maize, 5.52 million tonnes of wheat, and 1.23 million tonnes of soybean in 2012 (Table 5.1). In 2010, the largest amount of agricultural products was imported from the US, followed in descending order, by China, Australia, and Brazil (Korea International Trade Association, 2011).

Table 5.1: Korean imports of maize, wheat, soybean, and rice in 2012 and associated food self-sufficiency in 2001 and 2012.

Commodity	Quantity (tonnes)	Food self-sufficiency (%)	
	2012	2001	2012
Maize	8,112,000	0.8	0.9
Wheat	5,517,000	0.1	0.7
Soybean	1,232,000	7.7	9.5
Rice	681,000	>100	86.1

Source: Hwang, 2013

Agriculture and rural communities have both declined in Korea over the last 50 years. The rural population decreased from 3.93 million in 2001 to 3.12 million in 2009 whereas the proportion of rural residents over 65 years of age (yoa) increased from 24.4% in 2001 to 34.2% in 2009. The amount of farmland also declined from 1.88 million ha to 1.74 million ha over this same time period. As a result, the contribution of agriculture to GDP was only 2.4% in 2009, this decreasing from 4% in 2001 (Table 5.2) (Korea National Statistical Office, 2010).

Table 5.2: Agricultural statistics in Korea for 2001 and 2009

	2001	2009
Rural population(million)	3.9	3.1
% of total population	8.3	6.4
> 65 yoa of rural population (%)	24.4	34.2
Farmland (million ha)	1.9	1.7
% of GDP	4.0	2.4

Source: Statistics Korea, 2010

Organic agriculture has grown remarkably over the last 15 years in Korea. While the number of total farm households in Korea decreased from 1.38 million in 2000 to 1.15million in 2012, organic farm households increased from 353 in 2000 to 16,733 in 2012. Although the total farm area in Korea reduced from 1.89 million ha in 2000 to 1.73 million ha in 2012, organic farm area increased 296 ha in 2000 to 25,467 ha in 2012 (Table 5.3).

The Korean government provides three types of agricultural product certification; organic, no-pesticide, and low-pesticide. Foods with those three types of certification are in turn classed as environment friendly agricultural products (Jeong &

Moon, 2013). The environment friendly share of the agricultural market in Korea was USD 3.65 billion in 2010 and 15.1% of these products were sold through consumer cooperatives (Jeong et al., 2011). The Korean government recently announced that it would phase out the low-pesticide certification for agricultural products in 2015 as consumers confuse certification labels and it undercuts the credibility of organic agricultural products (Jeong & Moon, 2013).

Table 5.3: Korean agricultural statistics by farming type for 2000, 2010, and 2012

Farming type	Criteria	2000	2010	2012
Conventional	Household	1,380,552	993,082	1,007,917
	Farm area (ha)	1,886,961	1,520,994	1,565,711
	Yield (tonnes)	18,780,000	13,000,000	12,960,000
Organic	Household	353	10,790	16,733
	Farm area (ha)	296	15,517	25,467
	Yield (tonnes)	6,538	122,243	168,256
No & low pesticide	Household	2,095	173,128	126,350
	Farm area (ha)	1,743	178,489	138,822
	Yield (tonnes)	28,868	2,093,278	1,329,979
Total	Household	1,383,000	1,177,000	1,151,000
	Farm area (ha)	1,889,000	1,715,000	1,730,000
	Yield (tonnes)	18,800,000	15,200,000	14,500,000

Source: Korean Statistical Information Service (2014)
National Agricultural Products Quality Management Service (2014)

5.2.2. Data collection

This mixed methods study design integrated both quantitative and qualitative data collection and analysis. It was approved by the Joint-Faculty Research Ethics Board at the University of Manitoba (J2009: 085).

Farmers were surveyed using a questionnaire composed of both Likert-scaled and open-ended questions. The seven-page questionnaire was constructed to examine attitudes regarding food consumption, food production, food safety, food self-sufficiency, global and alternative food systems, local foods, government policies, and the roles of consumer cooperatives. Farmers were stratified into two groups: farmers that belonged to consumer cooperatives (i.e. member farmers) and those that were not (i.e. conventional farmers).

The survey data for conventional farmers were collected from five provinces (i.e. Gyeonggi, Gangwon, Chungcheong, Jeolla, and Gyeongsang) (Chapter 3 Figure 3.1). The survey data for member farmers were from three consumer cooperatives; Hansalim, iCoop, and Dure. In total, 284 farmer questionnaires were collected, comprising 166 conventional farmers and 118 member farmers. Both surveyed groups showed a gender and age bias, 88.1% of the surveyed conventional farmers and 92.8% of member farmers were male, as men usually represent their farms and farm households in Korea.

5.2.3. Data analysis

Demographic data such as age, income, education level, financial situation, family size, proportion of food expenditure were examined as means and response proportions (Table 5.4). Differences in any variance of demographic data between conventional and member farmers were analyzed using independent samples t-tests (Table 5.5).

Qualitative data in this study were collected from the four open-ended questions included in the questionnaire. Emerging themes from qualitative data were identified and matched with those from Likert responses (Johnson et al., 2007).

Factor analysis (varimax rotation) was used to identify the factor structure underlying the quantitative data set (SAS V9.2). Any variables (i.e. responses to Likert scale questions) with at least a 0.4 loading value were assigned to a factor. Cronbach alpha coefficients were calculated to test the reliability of the variables for each factor. All Cronbach alpha values were >0.6 and were thus considered satisfactory for internal scale consistency and thus were seen as appropriate for variable reduction (Hatcher, 1994)

Logistic regression models were developed using Akaike Information Criteria (AIC) for parameter estimation instead of testing null hypotheses (Burnham & Anderson, 2002). AIC logistic regression examined all possible models and individual models for multiple variables or square variables. For AIC model selection, factor scores of respondents from factor analysis were used, and a binary dataset was created using the lowest and highest 33% of respondents for binary logistic analysis. ΔAIC_c value <2 suggests substantial evidence for the model (Burnham and Anderson, 2002). Seven independent variables were used in analysis: age, membership, education, financial status, income, food expenditure, and family size. The cumulative AICc weights were calculated for each independent variable by summing the AICc weights for all models containing that variable. Variables with the highest cumulative AICc eights have the greatest relative influence on respondent perceptions (Brook & McLachlan, 2006)

Table 5.4: Differences in socio-demographics between conventional farmers and farmers that are members of consumer cooperatives in Korea

Variables	Conventional farmers (n=166)		Member farmers (n=118)		Sig.[a] (2-tailed)
	Proportion (%)	Mean(SE)	Proportion (%)	Mean(SE)	
Age					
15-30	3.3	48.56 (0.76)	2.7	48.15 (0.90)	0.726
31-45	33.1		41.8		
46-60	57.6		46.4		
Over 60	6.0		9.1		
Financial					
Not enough (1)	9.5	2.78 (0.07)	3.7	2.87 (0.08)	0.435
Tight (2)	22.2		26.2		
No extra money (3)	51.3		51.4		
Extra money (4)	14.6		16.8		
Enough (5)	2.5		1.9		
Annual income					
Less than $7K (1)	1.9	3.58 (0.10)	1.8	3.62 (0.11)	0.831
$7K - $14,999 (2)	16.2		10.7		
$15K - $29,999 (3)	39.8		38.4		
$30K - $44,999 (4)	19.9		28.6		
$45K - $59,999 (5)	8.7		14.3		
Over $60K (6)	13.7		6.3		
Family size					
1 person (1)	1.9	4.0 (0.08)	3.5	3.9 (0.11)	0.455
2 people (2)	8.0		9.6		
3 people (3)	12.4		20.0		
4 people (4)	43.8		27.0		
> 5 people (5)	34.0		40.0		
% Food Expenditure					
Less than 10% (1)	17.3	2.77 (0.1)	25.7	2.5 (0.14)	0.097
10 - 19% (2)	26		37.1		
20 - 29% (3)	27.3		17.1		
30 - 39% (4)	22.0		8.6		
40 - 49% (5)	6.0		4.8		
Over 50% (6)	1.3		6.7		
Education					
No high school (1)	7.6	3.57 (0.09)	17.7	3.42 (0.14)	0.379
Some high school (2)	1.9		3.5		
High school (3)	48.4		33.6		
Collage (4)	12.0		8.9		
University (5)	28.9		36.3		
Post graduate (6)	1.3		-		
Gender					
Female	11.9		7.2		0.203
Male	88.1		92.8		

[a] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

Table 5.5: Differences in farming and operations between conventional farmers and farmers that are members of consumer cooperatives in Korea

	Conventional farmers (mean (SE), n=166)	Member farmers (mean (SE), n=118)	Sig.[a] (2-tailed)
Duration of farming (years)	17.7 (0.90)	18.9 (1.12)	0.405
Farming status (%)			
Organic (certified)	4.7	41.0	
Organic (non-certified)	12.1	5.2	
Pesticide free (certified)	3.4	28.4	
Low pesticide (certified)	14.1	20.2	
Conventional (pesticide)	57.1	2.2	
Organic + pesticide	8.7	3.0	
Numbers of farmers (n, %)			
Rice field	91 (54.8%)	23 (19.5%)	
Vegetable field	93 (56%)	70 (59.3%)	
Orchard	33 (19.9%)	42 (35.6%)	
Area (ha)			
Rice field	2.94 (1.11)	1.34 (0.14)	0.217
Vegetable field	1.08 (0.12)	1.29 (0.18)	0.318
Orchard	1.48(0.31)	1.9 (0.23)	0.280
Income source for living expense (%)			
Farm full-time	64.5 (2.83)	79.6 (2.60)	0.000
Part time job	12.6 (1.84)	5.6 (1.53)	0.005
Seasonal work	3.0 (0.83)	3.2 (0.80)	0.839
Family member's income	13.0 (1.90)	7.3 (1.86)	0.036
Government subsidy	0.2 (0.09)	1.2 (0.35)	0.005
Others	6.7 (1.58)	3.2 (1.31)	0.112
Product distribution route (%)			
Consumer cooperatives	0.4 (0.25)	65.0 (2.63)	0.000
Agricultural cooperatives	50.5 (3.13)	9.1 (1.66)	0.000
Intermediary	10.5 (1.94)	3.2 (0.87)	0.001
Consumption for my family	9.3 (1.55)	6.9 (1.44)	0.323
Private sale	19.8 (2.48)	11.7 (1.65)	0.008
Others	7.8 (1.78)	3.7 (1.21)	0.076

[a] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

5.3. Results

5.3.1. Differences in socio-demographics and farming operations

Interestingly, there were no significant differences in socio-demographics between conventional and member farmers, i.e., age, financial status, annual income, family size, percentage of food expenditure in income, education, or gender were all equivalent (Table 5.4). Likewise duration of farming did not differ between the two groups (Table 5.5).

In contrast, there were many differences in farming and operations between the two farmer groups. Certification differed predictably: thus, 57.1% of conventional farmers used conventional agricultural practices, followed in descending order, by certified low-pesticide farming (14.1%), non-certified organic farming (12.1%), conventional farming in combination with organic farming (8.7%), and organic farming (4.7%). In contrast, 41.0% of member farmers were certified as organic, followed in descending order, by certified pesticide free (28.4%), certified low-pesticide farming (20.2%), and non-certified organic farming (5.2%) and very few (2.2%) had conventional farming practices.

In total, 54.8% of conventional farmers (n=91) produced rice and 56% (n=93) produced vegetable. In contrast, the largest proportion (59.3%) of member farming (n=70) produced vegetable followed, in descending order, by orchards (35.6% or n=42) and rice (19.5% or n=23). In turn, 64.5% of the overall income for conventional farmers arose from the farm and 13.0% was from family member incomes whereas 79.6% of overall member farmer incomes arose from the farm and 7.3% was from family member incomes.

The product distribution route of two farmer groups also differed substantially. Conventional farmers sold 50.5% of their products to government-run agricultural cooperatives, followed, in descending order, by private sales (19.8%), sales to intermediaries (10.5%), and consumption by their families (9.3%). Meanwhile, member farmers sold 65.0% of their products to consumer cooperatives, followed, in descending order, by private sales (11.7%), government-run agricultural cooperatives (9.1%), and consumption by their families (6.9%). Only 3.2% of member products were sold to intermediaries.

5.3.2. Farmer attitudes towards the global agri-food system

Although farmers as a whole reacted negatively to the global agri-food system, conventional farmers in this study were significantly ($p<0.004$) more optimistic than member farmers (Table 5.6). Thus, 40.3% of conventional farmers were either neutral or positive about the global agri-food system, in comparison to 25.9% of member farmers. Furthermore, 49.3% indicated either a positive or neutral response to the statement that global agri-food system created opportunities for access global markets, in contrast to 31.2% of member farmers. Yet, both farmer groups were generally critical of the impacts of unstable prices of imported foods on domestic food systems (Table 5.6).

> *"Unless alternative food systems are developed, both consumers and farmers take the risks and middlemen get the benefits. Farmers will get poorer and consumers will suffer from unsafe and high-priced foods."*
>
> *(Conventional farmer: Gyeonggi #17)*

Ultimately, some felt this was a defining characteristic of any global agri-food system.

> *"Food sovereignty of a country should be respected and transnational agricultural industry should cease their business operations."*
>
> *(Conventional farmer: Gyeongsang #24)*

Table 5.6: Farmer perceptions of the global agri-food system

	Conventional farmer			Member farmer			Sig.[d] (2-tailed)
	Mean (SE)[a]	-/+[b] (%)	N/DK[c] (%)	Mean (SE)[a]	-/+[b] (%)	N/DK[c] (%)	
I feel positive about the current global food system.	3.17 (0.14)	54.6/22.1	18.2/5.2	2.55 (0.16)	67.6/12.0	13.9/6.5	0.004
Global agri-food system creates opportunities for me to access global markets.	3.44 (0.15)	46.4/27.2	21.2/5.3	2.71 (0.16)	58.7/13.8	17.4/10.1	0.006
Unstable prices of imported foods strongly affect our food system.	5.97 (0.09)	4.9/90.3	3.0/1.8	5.82 (0.13)	7.7/82.9	7.7/1.7	0.331
Imported foods are generally of high quality.	2.51 (0.10)	76.7/16.6	4.9/1.8	2.45 (0.12)	74.6/15.8	7.9/1.8	0.669

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N is 'Neutral', DK is 'Don't know'.
[d] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

5.3.3. Farmer perceptions of rural changes

Food self-sufficiency

Despite the recent decline of food self-sufficiency in Korea, 46% of conventional farmers and 66% of member farmers responded positively the question: 'is there a solution of food self-sufficiency in Korea?' (Table 5.7). Also, 95.2% of conventional farmers and 89.7% of member farmers thought low food self-sufficiency

in Korea was an important issue (Table 5.9). Unlike conventional farmers, member farmers have diverse supports from consumer cooperatives, these including relatively high selling prices, contract harvests, and compensation for loss in light of severe climate conditions. It seems that these kinds of consumer-support systems gave rise to these more optimistic attitudes.

Of those optimistic respondents, most felt government policy should play a key role in fostering these changes (77 % of all farmers) (Table 5.8). Thus, 29% of conventional farmers and 43% of member farmers indicated the need to build broader policies that would support rural communities and farmers as a way of raising food self-sufficiency (Table 5.8).

Table 5.7: Farmer attitudes towards the solutions to food self-sufficiency

Attitude	Conventional farmers [a]	Member farmers [a]
Positive	46.1%	66.0%
Negative	36.2%	18.1%
Don't know	17.7%	16.0%

[a] Proportions of responses to the question, 'Is there a solution of food self-sufficiency in Korea?'

Indeed, conventional farmers were twice as likely as member farmers to identify the central role of governments in generating supportive policies and regulations that would foster food self-sufficiency (26% vs. 13%. respectively).

> *"The Korean government should implement policies to support farmer incomes so that the rate of food self-sufficiency is raised."*
>
> *(Conventional farmer: Gyeonggi 17)*

Table 5.8: Farmer attitudes regarding various governmental approaches to increasing food self-sufficiency in Korea (n=109)

	Combined[a]	Conventional [a]	Member [a]
Establish policies supporting rural regions	40 (37%)	20 (29%)	20 (43%)
Establish food self-sufficiency policies	24 (22%)	18 (26%)	6 (13%)
Establish policies supporting small-scale farming	13 (12%)	10 (15%)	3 (7%)
Conserve agricultural land	10 (9%)	5 (7%)	5 (11%)
Develop agricultural technology	4 (4%)	3 (4%)	1
Support food specialty	4 (4%)	2 (3%)	2
Trade foods between North and South Korea	3 (3%)	3 (4%)	0
Quit foods imports (use domestic foods)	3 (3%)	2 (3%)	1
Restrain meat consumption	3 (3%)	0	3 (7%)
Vitalize direct marketing	2	1	1
Increase food safety	1	1	0
Educate farmers	1	1	0
Support people wanting to return to rural	1	0	1

[a] Frequencies of responses to open-ended question

Most (74.2%) farmers in this study thought that the government has generally neglected its role in promoting food self-sufficiency (Table 5.9).

> *"Many Korean farmers needed to exit from farming because of government policies that undermined domestic agriculture and the high price of farmland."*
>
> *(Member farmer: iCoop # 9)*

Indeed, some of the more cynical participants felt that this government neglect was deliberate in nature and reflected a focus on industrial growth.

> *"The Korean government established industrial economic growth as a major policy while agricultural policies focused on import of food.*

Additionally, the Korean government does not even have a goal of food self-sufficiency."

(Member farmer: Dure #29)

Table 5.9: Farmer perceptions of food self-sufficiency

Question	Conventional farmers			Member farmers			Sig.[d] (2-tailed)
	Mean (SE)[a]	-/+[b] (%)	N/DK[c] (%)	Mean (SE)[a]	-/+[b] (%)	N/DK[c] (%)	
Low food self-sufficiency in Korea is an important issue to me	6.45 (0.07)	1.2/95.2	3.6/0	6.09 (0.10)	2.6/89.7	7.7/0	0.004
Korean agriculture should adopt large industrial farming practices.	2.63 (0.14)	69.7/20.0	9.7/0.6	2.27 (0.17)	76.1/16.2	6.0/1.7	0.104
Our government has created adequate policies for food self-sufficiency.	2.51 (0.14)	75.0/14.6	9.2/1.2	2.50 (0.14)	73.3/12.1	14.7/0	0.976

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N is 'Neutral', DK is 'Don't know'.
[d] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

Rural concerns and agricultural policies

Around the globe, farmers are socioeconomically disadvantaged and are often among the poorest socioeconomic classes in their respective nations. Most farmers in this study considered that the lack of support between farmers and consumers was the underlying cause of farmer poverty; 92.1% of conventional farmers and 84.5% of member farmers disagreed with the statement that 'farmers are now fairly compensated' (Table 5.11). Although low food prices are often induced by the over-production of food elsewhere in the world, the Korean government has actively adopted a low food price policy by promoting industrial economic growth since 1970s

and continues to do so today (Varshney, 1993). In total, 37% of conventional farmers agreed that these policies had sacrificed domestic agriculture for the good of industrial economic growth. Interestingly, only 13.7% of member farmers agreed with this statement (Table 5.10). Overall, the large majority of respondents (i.e.77.9% of all farmers, 78.6% of conventional farmers and 77.1% of member farmers) contended that current agricultural policies failed to reflect farmer concerns (Table 5.12). Nevertheless, it was clear that many were still hopeful that this might be changed; thus, 36% of conventional farmers and 35.1% of member farmers still 'felt positive about the future of Koran agriculture', and most (69.5%) felt that industrial economic growth was compatible with a healthy domestic agricultural sector (Table 5.10).

Table 5.10: Farmer attitudes towards the future of Korean agriculture

	Conventional farmers			Member farmers			Sig.[d] (2-tailed)
	Mean[a] (SE)	-/+[b] (%)	N/DK[c] (%)	Mean[a] (SE)	-/+[b] (%)	N/DK[c] (%)	
It is inevitable that we sacrifice our own ability to farm when achieving economic growth in Korea.	3.18 (0.18)	59.4/37.0	3/0.6	2.19 (0.16)	79.5/13.7	6.8/0	0.000
I feel positive about the future of Korean agriculture.	3.93 (0.14)	41.2/36.0	22.9/0	3.82 (0.17)	44.1/35.1	19.8/0.9	0.593

[a] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.
[b] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[c] N is 'Neutral', DK is 'Don't know'.
[d] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

Food safety associated with BSE

Rallies against the import of US beef in2008 had huge implications for Korean society (Chapter 3). Along with consumers, farmers recognized that food safety was

an issue of great importance and some farmers considered changing their farming practices to attain these goals. Member farmers in this study showed proactive attitudes towards food safety as 52% endeavoured to produce safe foods.

> *"I try to produce safe foods that are worthy of trust from consumers. I am interested in local foods."*
>
> *(Member farmer: Hansalim #13)*

Meanwhile, 24% of conventional farmers had considered converting their agronomic practices to ones that more environment friendly and 13% was concerned about food safety (Table 5.11).

> *"I was concerned about pesticide and chemical fertilizer use and consider applying environment friendly farming."*
>
> *(Conventional farmer: Gyeongsang #24)*

Yet, 35% of conventional farmers and 13% of member farmers responded they were unlikely to change their farming practice in light of the BSE-associated protests (Table 5.11). And some questioned whether the onus even rested with the farmers.

Table 5.11: Implications of BSE for conventional and member farmers in Korea (n=77)

	Combined		Conventional		Member	
	Frequency (%)	Rank	Frequency (%)	Rank	Frequency (%)	Rank
No difference	24 (31%)	1	22 (35%)	1	2 (13%)	3
Consider environment friendly farming	18 (23%)	2	15 (24%)	2	3 (20%)	2
Endeavour to produce safe foods	9 (12%)	3	4 (6%)	5	5 (33%)	1
Consider food safety	8 (10%)	4	8 (13%)	3	0	-
Improve animal farming systems	8 (10%)	4	7 (11%)	4	1 (7%)	4
Decrease the prices of Korean beef	2 (3%)	5	2 (3%)	6	0	-
Others (e.g. choose domestic beef, anxiety)	1 (1%)	6	1 (2%)	7	0	-

5.3.4. Factors associated with farmer attitudes towards agriculture and food concerns

Factor analysis was used better explain and understand differences in farmer attitudes towards risks associated with food systems. Three factors were extracted; the first factor reflected farmer attitudes towards agricultural policies about food safety and rural concerns, the second reflected farmer attitudes towards the government-run Korean Agricultural Cooperative, and the third reflected farmer attitudes towards local foods. The proportion of variance explained by each of the factors was 48%, 25%, and 11%, respectively. Cronbach coefficient alpha value was acceptable at 0.81 indicating a reliable homogeneity within each factor (Table 5.12). The factor scores for factor one ranged from -1.71 to 2.91, those for factor two ranged from -2.36 to 2.29, and those for factor three ranged from -4.03 to 1.52.

Conventional farmers in this study were associated with a negative mean value (-0.07) for factor one scores whereas member farmers had positive mean value (0.10) (Figure 5.1), indicating that conventional farmers were much more critical of existing government agricultural policies than member farmers. It seems that member farmers may be addressing many of their rural concerns through their involvement with consumer cooperatives.

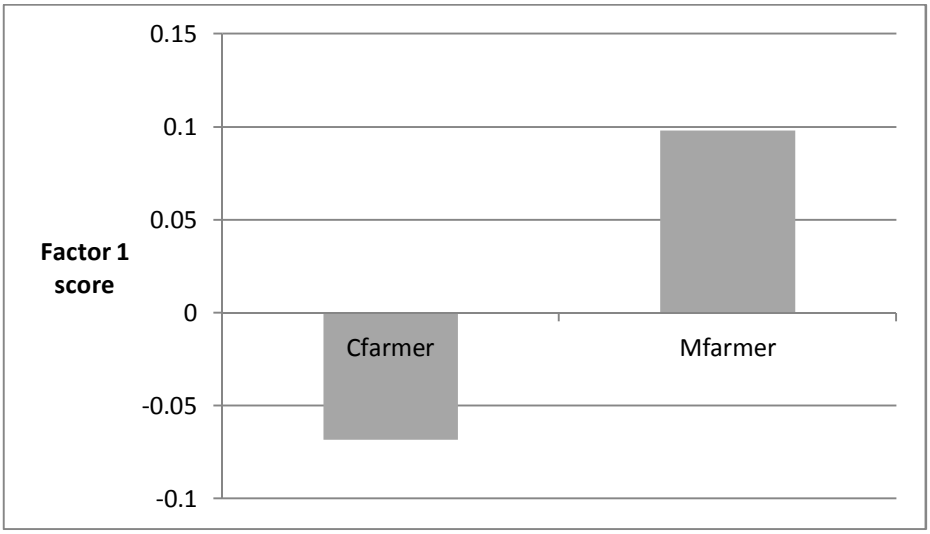

Figure 5.1: Mean of factor one scores for conventional and member farmers

Conventional farmers and member farmers showed contrasting attitudes towards the government-run Korean Agricultural Cooperatives (KAC) along in factor two (Table 5.12). As conventional consumers sell 50.5% of their products through the KAC (Table 5.14), they showed more confidence in the market management of the KAC compared to member farmers. Indeed, only 35.3% of member farmers trusted the quality of the foods that KAC provide.

Table 5.12: Factor analysis for conventional and member farmer attitudes in Korea

Factor analysis (Cronbach coefficient alpha: 0.81)	Factor loading			Conventional farmers, %		Member farmers,%		Sig.[c]
	Fa. 1	Fa. 2	Fa. 3	-/+ [a]	N/DK [b]	-/+ [a]	N/DK [b]	
Factor 1: Agricultural policies (Eigen value: 4.74)								
The Korean government is adequately managing food safety.	**0.75**			67.1/9.2	23.2/0.6	59.1/13.0	27/0.9	0.422
Farmers are now fairly compensated.	**0.65**			92.1/3.1	3.7/1.2	84.5/6.0	9.5/0	0.081
I trust the safety of food provided by large retailers.	**0.65**			73.0/7.4	19.6/0	73.0/12.2	14.8/0	0.859
Current food policies adequately reflect consumer concerns in Korea.	**0.59**			51.2/21.3	26.2/1.2	46.0/27.9	25.2/0.9	0.643
Current agricultural policies adequately reflect farmer concerns.	**0.55**			78.6/8.4	12.3/0.7	77.1/7.3	15.6/0	0.95
Factor 2:Korean Agricultural Cooperatives (Eigen value: 2.48)								
I am satisfied with Agricultural Cooperatives.		**0.78**		42.9/42.2	14.9/0	63.1/15.3	21.6/0	0.000
I trust the food quality that the Agricultural Cooperatives provide.		**0.69**		17.2/61.4	20.3/1.2	32.8/35.3	31/0.9	0.000
Selling to Agricultural Cooperatives is more profitable for farmers than selling to large retailers.		**0.68**		17.5/61.7	18.2/2.6	34.2/31.5	32.4/1.8	0.000
Factor 3: Local foods (Eigen value: 1.06)								
Concern over food safety has increased my interest in local food.			**0.67**	3.1/89.0	7.4/0.6	0.9/92.2	7.0/0	0.76
Buying locally produced foods is an important way to support small farmers.			**0.62**	5.5/86.7	6.7/1.2	7.8/83.6	7.8/0.9	0.16
I like to buy locally produced foods.			**0.58**	3.6/86.7	9.7/0	6.0/84.5	9.5/0	0.001
I check food labels to see where the product is produced.			**0.53**	6.8/85.8	7.4/0	1.7/92.0	6.2/0	0.09

[a] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[b] N is 'Neutral', DK is 'Don't know'.
[c] [a] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

Regression analysis was used to identify any factors that would help explain differences in farmer attitudes regarding government policies, Korean Agricultural Cooperatives, and local food systems. Seven independent variables were used to calculate Akaike's Information Criterion (AIC) for factor one (Table 5.13). The best model resulting in a ΔAIC_c value of 0 included four independent variables: age, financial status, education, and food expenditure. Five models (As ΔAIC_c value<2) suggest substantial evidence for the models for factor one.

Table 5.13: Selected candidate models explaining farmer attitudes towards governmental agricultural policies (factor 1)

Model	Log(L)	K	AIC_c	ΔAIC_c	AIC_{cw}
Age+Financialstatus+Foodexpenditure+Education	143.328	5	153.328	**0.0**	0.170
Membership+Age+Financialstatus+Foodexpenditure+Education	141.377	6	153.377	**0.0**	0.166
Age+Financialstatus+Education	145.603	4	153.603	**0.3**	0.148
Age+Financialstatus+Foodexpenditure+Education+Familysize	141.891	6	153.891	**0.6**	0.128
Financialstatus+Foodexpenditure+Education	146.303	4	154.303	**1.0**	0.104
Financialstatus+Income+Foodexpenditure+Education	145.619	5	155.619	2.3	0.054
Financialstatus+Education	149.731	3	155.731	2.4	0.051
Age+Financialstatus^2+Education	145.821	5	155.821	2.5	0.049
Membership+Age+Financialstatus+Income+Foodexpenditure+Education+Familysize	140.171	8	156.171	2.8	0.041
Membership+Financialstatus+Income+Foodexpenditure+Education	144.291	6	156.291	3.0	0.039
Membership+Financialstatus+Education	148.751	4	156.751	3.4	0.031
Membership+Financialstatus+Income+Education	147.681	5	157.681	4.4	0.019
Age+Financialstatus+education+Familysize	157.637	5	167.637	14.3	0.000

Financial status of the two farmer groups was the most important demographic characteristic influencing farmer perceptions of factor one (agricultural policies), followed in descending order of relative importance by education, age, food expenditure. In contrast, membership, family size, and income variables had much less influence on government-related farmer perceptions (Table 5.14). The reduced influence of membership likely reflects the highly critical views of governmental agricultural policies reflected by both farmer groups.

Important demographic variables influencing two farmers groups differed. Financial status was the most important variables influencing conventional farmer attitudes, followed in descending order of importance by education, and food expenditure whereas age, family size, and income variables were less important variables. Meanwhile, age was the most important variable influencing member farmer attitudes, followed in descending order of importance by food expenditure and education. In contrast, financial status but also family size and income variables were less important for member farmers (Table 5.14).

Table 5.14: Cumulative Akaike weights for the seven independent variables that influenced farmer attitudes regarding agricultural policies (factor 1)

Variable	Combined		General farmer		Member farmer	
	AIC[a]	Rank	AIC[a]	Rank	AIC[a]	Rank
Financial status	1.00	1	0.99	1	0.31	5
Education	0.85	2	0.90	2	0.33	3
Age	0.69	3	0.32	4	0.72	1
Food expenditure	0.59	4	0.59	3	0.49	2
Membership	0.38	5	-	-	-	-
Family size	0.35	6	0.26	5	0.32	4
Income	0.32	7	0.26	6	0.26	6

[a] Cumulative Akaike weight is the percent of weight attributable to models containing that particular variable and is calculated by summing the AICc model weights of every model containing that variable.

Although farmer perceptions of agricultural policies were critical as a whole, negative attitudes toward the government policies was much greater among farmers with lower household income for both conventional and member farmers (Figure 5.2). Conventional farmers who had adequate incomes had the most positive attitudes toward governmental policies.

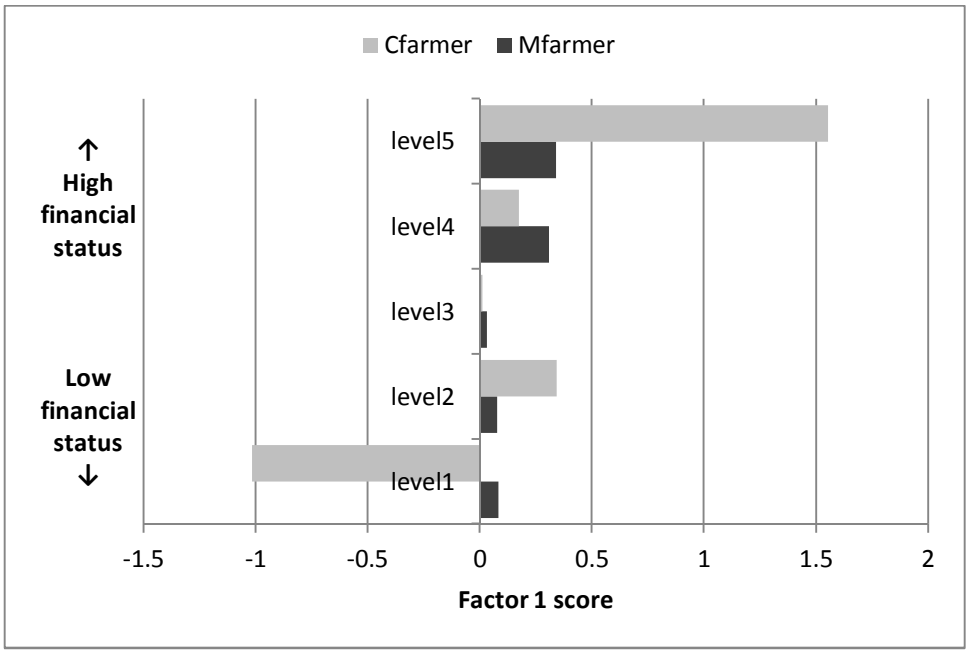

Figure 5.2: Mean of factor one scores as a affected by financial status for conventional and member farmers.
Note: financial status ranged from level 1 (not enough financial resources) to level 5 (more than enough financial resources)
.

Farmers with university degrees had more negative attitudes towards government agricultural policies than respondents with lower formal education levels for both groups. University educated conventional farmers were the most negative whereas member farmers with some high school education were the most positive (Figure 5.3).

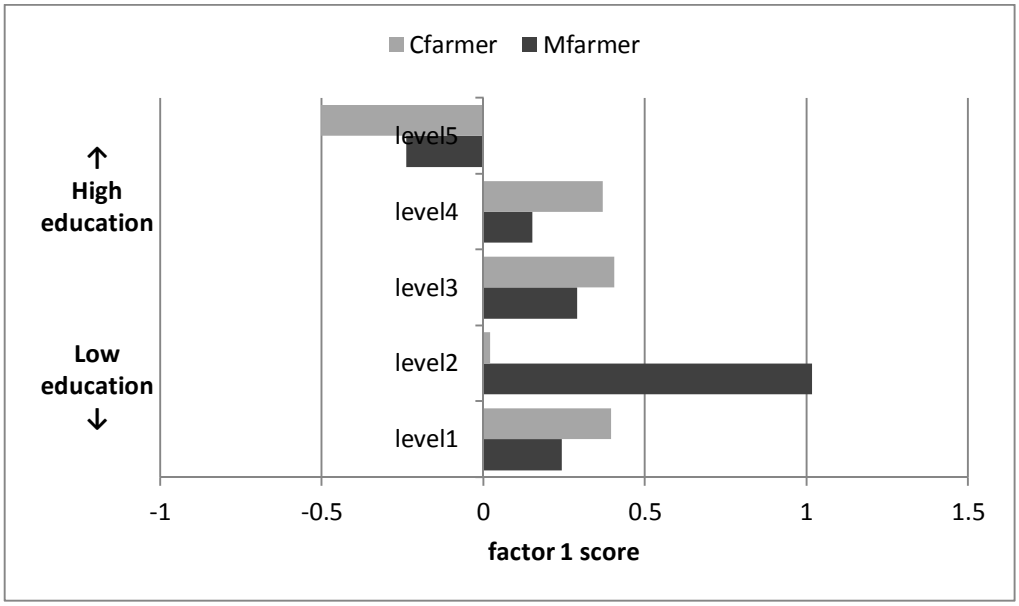

Figure 5.3: Mean of factor one scores as affected by formal education for conventional and member farmers
Note: education levels ranged from level 1(no high school) to level 5 (university degree)

Membership was the most important demographic characteristics influencing farmer perceptions of factor two (attitudes toward Korean Agricultural Cooperatives), followed in descending order of relative importance by food expenditure, age, and family size. In contrast, education, income, and financial status variables had much less influence on farmer perceptions as a whole (Table 5.15).

Education of two farmer groups was the most important demographic characteristics influencing farmer perceptions of factor three (local foods), followed in descending order of relative importance by membership, food expenditure, and age. In contrast, family size, income, and financial status variables had much less influence on farmer perceptions of local foods (Table 5.15).

Table 5.15: Cumulative Akaike weights for the seven independent variables that influenced farmer attitudes regarding Korean Agricultural Cooperatives (factor 2) and local foods (factor 3)

Variable	Factor two		Factor three	
	AIC[a]	Rank	AIC[a]	Rank
Membership	1.00	1	0.45	2
Food expenditure	0.99	2	0.42	3
Age	0.63	3	0.40	4
Family size	0.35	4	0.35	5
Education	0.33	5	0.75	1
Income	0.28	6	0.28	6
Financial status	0.27	7	0.27	7

[a] Cumulative Akaike weight is the percent of weight attributable to models containing that particular variable and is calculated by summing the AICc model weights of every model containing that variable.

Although two farmer groups showed very supportive for local foods, member farmers in this study were associated with a negative mean value (-0.10) for factor three scores while conventional farmers had positive mean value (0.07) (Figure 5.4), indicating that member farmers were relatively critical of local foods compared to conventional farmers. It seems that member farmers may be more interested in food safety than supporting local foods (Table 5.12).

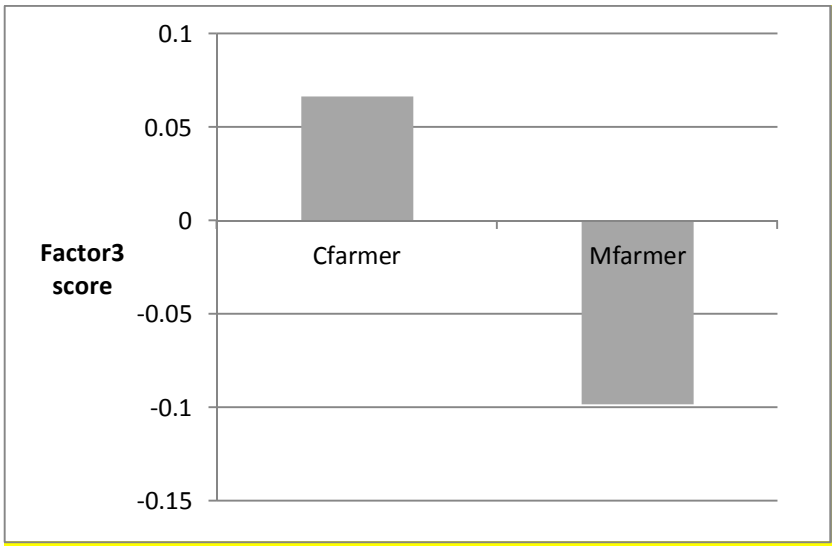

Figure 5.4: Mean of factor three scores for conventional and member farmers

Farmers with no high school degrees had more negative attitudes towards local foods than farmers with higher formal education levels for both groups. Member farmers with no high school degree were the most negative whereas member farmers with college degree were the most positive (Figure 5.5).

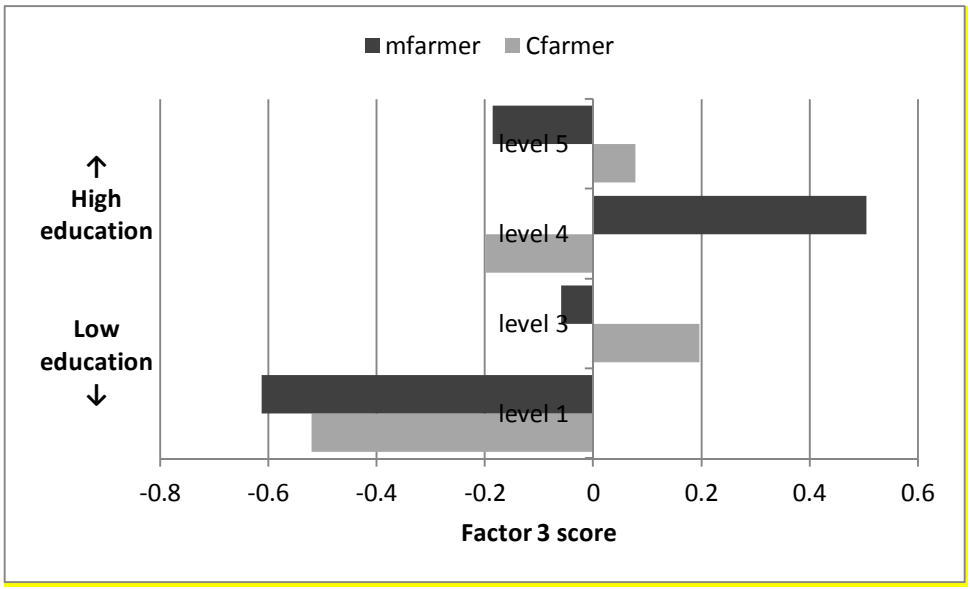

Figure 5.5: Mean of factor three scores as affected by formal education for conventional and member farmers
Note: education levels ranged from level 1(no high school) to level 5 (university degree)

5.3.5. Farmer perceptions of food systems

The Korean government launched the Korean Agricultural Cooperative (KAC) in 1961 to implement effective agricultural policies and to facilitate agricultural reform. Outcomes of this study show that KAC has played the primary role in food distribution in Korea as conventional farmers sold 50.5% of their products to KAC, in contrast to

member farmers who only sold 9.1% (Table 5.16). In general, KAC collects farm products and sells to secondary middlemen, large retailers, and its direct marketing stores in urban centres. In contrast, consumer cooperatives were much more important for member farmers; indeed, member farmers sold 65.0% of their products to consumer cooperatives, unlike conventional farmers at 0.4% (Table 5.16).

Table 5.16: Relative importance of various distribution routes (%) for conventional and member farmers in Korea

Distribution route	Conventional farmers		Member farmers	
	Proportion (%)	Rank	Proportion (%)	Rank
Agricultural cooperatives	50.5	1	9.1	3
Private sale	19.8	2	11.7	2
Intermediary	10.5	3	3.2	6
Consume for my family	9.3	4	6.9	4
Others	7.8	5	3.7	5
Consumer cooperatives	0.4	6	65.0	1

Direct marketing

This study showed that most farmers wanted to reduce the distance from farm to market. Indeed, over 95% of both conventional and member farmers agreed that there is a need to shorten the distance between farm and fork for consumers (Table 5.17). Accordingly, they agreed too many middlemen are involved in food distribution, this involving up to six distribution steps in Korea (Jeon et al, 2009). Moreover, 98.8% of conventional farmers and 97.4% of member farmers agreed that small-scale farms in

Korea are threatened by the needless presence of middlemen and their excessive profits (Table 5.17).

Table 5.17: Conventional and member farmer attitudes towards direct marketing in Korea

	Conventional		Member		Sig.[c] (2-tailed)
	+/- [a]	N/DK[b]	+/- [a]	N/DK[b]	
There is a need to shorten the distance between farm and fork for consumers.	95.2/2.4	1.8/0.6	95.7/0.9	3.4/0	0.19
There are too many middlemen between farm and fork in Korea.	98.8/1.2	0/0	97.4/0.9	1.7/0	0.017
Government should promote direct marketing policies.	96.3/0.6	2.5/0.6	94.8/2.6	2.6/0	0.02
Excessive profits of middlemen threaten small farms in Korea.	98.8/0	1.2/0	97.4/0.9	0.9/0.9	0.002
Consolidation of corporate power in the food industry threatens the sustainability of our food system.	88.3/4.3	5.5/1.8	95.5/0	2.7/1.8	0.78

[a] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[b] N is 'Neutral', DK is 'Don't know'.
[c] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

Local food systems

Most participants felt that local food systems had great promise in Korea. The term local is of course subjective and thus varied substantially among respondents. Thus, 74% of conventional and 69.3% of member farmers in this study indicated that the term was 'my hometown and adjacent town' (Table 5.18). Farmers generally perceived 'local' to refer to a smaller area than did consumers (Chapter 4).

Farmer attitudes towards local foods were generally very positive. Over 80% of farmers were likely to buy locally produced foods (Table 5.12). Although both farmer

groups advocated for the importance of local food and small-scale farms, conventional farmers were more likely to emphasize the importance of supporting local communities and member farmers were more focused on food safety, as the latter group was more concerned about food origin and labelling (Table 5.12).

Table 5.18: Conventional and member farmer definitions of the term 'local'

	Conventional (%)	Member (%)
Hometown	56.3	41.2
Adjacent town to your own	18.1	28.1
Province	10.6	12.3
Country	9.4	10.5
Adjacent province to your own	5.6	7.9

Both conventional and member farmers were most likely to shop at Korean Agricultural Cooperatives stores and small street markets (i.e. traditional markets) for their foods, although the latter group was much less likely to shop at KACs (Table 5.19). Conventional farmers were next most likely to purchase foods from other farmers directly whereas member farmers were next most likely to use consumer cooperatives. Therefore, it seemed that over 80% of farmers purchased locally produced foods in one from or another. These results showed access to local markets strongly influenced food purchasing behaviour as KAC stores and traditional markets are most common in rural areas compared to the large retail markets that dominate urban areas. Even though member farmers were selling their products to consumer cooperatives, only 15.8% of

their foods were bought there as consumer cooperatives are generally situated in urban areas.

Table 5.19: Location of food purchases for conventional and member farmers in Korea (% of responses).

Location of food purchase	Conventional farmers		Member farmers	
	Proportion (%)	Rank	Proportion (%)	Rank
Korea Agricultural Cooperative	39.1	1	19.7	1
Traditional markets	15.5	2	18.0	2
Direct from other farmers	13.9	3	12.9	4
Large retailers	10.7	4	11.4	5
Grocery stores	6.6	5	9.0	6
Others	5.9	6	8.7	7
Wholesale markets	5.4	7	3.2	8
Consumer cooperatives	2.7	8	15.8	3

5.3.6. Differences in farmer attitudes towards foods

Attitudes towards foods as well as food purchasing behaviours were also very different between the two farmer groups. Conventional farmers in this study indicated that BSE was their most important food concern followed, in descending order, by GM foods and melamine contamination, and pesticide was ranked as least important. In contrast, member farmers were most concerned about GM foods, whereas pesticide use and BSE were ranked as second and third, respectively, and avian influenza was ranked as least important (Table 5.20).

Table 5.20: Important food concerns for conventional and member farmers in Korea

Food issue	Conventional farmers		Member farmers		Sig.[c] (2-tailed)
	Mean (SE)	Rank[b]	Mean (SE)	Rank[b]	
BSE[a]	2.36 (0.11)	1	3.15 (0.12)	3	0.000
GM foods	2.61 (0.14)	2	2.20.(013)	1	0.031
Melamine	3.47 (0.11)	3	4.15 (0.12)	4	0.000
Avian influenza	3.87 (0.12)	4	4.41 (0.14)	5	0.004
Swine influenza	4.21 (0.11)	5	4.77 (0.12)	6	0.000
Pesticide use	4.47 (0.15)	6	2.32 (0.16)	2	0.001

[a] Issues ranked by each respondent from most important(1) to least important (6)
[b] Relative ranking of means from 1 (highest) to 6 (lowest)
[c] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

Food purchasing priorities also differed between conventional and member farmers. Conventional farmers indicated that 'freshness' was their most important purchasing criterion followed in descending order by 'safety' and 'price' whereas member farmers indicated that 'safety' and 'organically grown' were the first and second most important factors, respectively (Table 5.21). The relative rankings between the two groups were very similar, except for 'organically grown', which was ranked much higher by member farmers (second) than conventional farmers (seventh) and to a lesser degree 'price' which was ranked higher by conventional farmers (third) than member farmers (fifth). Member farmers clearly preferred local organic foods, which in turn reflected their own farming practices (50% of member farmers practiced organic agriculture in contrast to only 2% of conventional farmers). Since price was also a higher priority, conventional farmers were perhaps unlikely to buy relatively expensive organic products.

In turn, 'knowing farmer', 'easy to prepare', and 'appearance' were the low ranked factors for both farmer groups.

Table 5.21: Important food factors for farmers when purchasing foods

Food factor [a]	Conventional farmers		Member farmers		Sig.[c] (2-tailed)
	Mean (SE) [b]	Rank	Mean (SE) [b]	Rank	
Freshness	2.6 (0.13)	1	3.58 (0.18)	3	0.000
Safety	3.05 (0.20)	2	2.53 (0.18)	1	0.054
Price	4.71 (0.18)	3	5.26 (0.21)	5	0.045
Taste	4.79 (0.19)	4	5.82 (0.23)	6	0.001
Produced locally	5.22 (0.19)	5	4.87 (0.21)	4	0.224
Nutrient value	6.0 (0.17)	6	6.24 (0.20)	7	0.355
Organically	6.13 (0.24)	7	3.37 (0.23)	2	0.000
Knowing farmers	6.72 (0.21)	8	6.62 (0.23)	8	0.730
Easy to prepare	7.79 (0.17)	9	8.73 (0.15)	10	0.000
Appearance	7.81 (0.18)	10	8.08 (0.21)	9	0.319

[a] Issues ranked by each respondent from most important(1) to least important (10)
[b] Relative ranking of means from 1 (highest) to 10 (lowest)
[c] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

The two farmer groups also used very different sources for accessing information. For conventional farmers, their most important source of information was other farmers, followed in descending order, by mass media such as TV, then newspapers and the Internet. In contrast, consumer cooperatives and civil organizations represented the two most important sources for member farmers, followed in descending order by other farmers, the Internet, and their families. It seems that conventional farmers preferred private sources of information whereas member farmers obtained information through

public and social movement sources (Table 5.22). Yet there were also similarities between the two groups. Both chose their peers as primary sources of their information and, importantly, food industry, government, and scientists were the least important sources for both (Table 5.22).

Table 5.22: Important source of information for conventional and member farmers in Korea

Information source	Conventional farmers		Member farmers		Sig.[c] (2-tailed)
	Mean (SE) [b]	Rank	Mean (SE) [b]	Rank	
Other farmers [a]	2.87 (0.19)	1	4.32(0.23)	3	0.000
TV	4.18 (0.23)	2	5.57 (0.25)	7	0.000
Newspapers	4.59 (0.18)	3	5.27 (0.22)	6	0.017
Civil organization	4.59(0.17)	4	3.90 (0.23)	2	0.015
Internet	4.72 (0.20)	5	4.75 (0.24)	4	0.946
Family	5.01 (0.20)	6	5.17 (0.24)	5	0.609
Consumer cooperatives	6.08 (0.23)	7	2.62 (0.19)	1	0.000
Food industry	6.81 (0.19)	8	7.49 (0.21)	9	0.016
Scientists	7.96 (0.18)	9	8.17 (0.22)	10	0.458
Government	8.03(0.17)	10	7.48 (0.23)	8	0.48

[a] Issues ranked by each respondent from most important(1) to least important (10)
[b] Relative ranking of means from 1 (highest) to 10 (lowest)
[c] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

5.4. Discussion

The outcomes of this study were consistent with those in other studies (e.g. Kings & Ilbery, 2010; Tuomisto et al., 2012; Wittman, 2009) as they relate to contrasting attitudes between conventional farmers and organic farmers, in large part because most

member farmers surveyed here practiced organic agriculture. While both member and conventional farmers were concerned about agricultural economic risks, the former were more aware of agriculture-associated environmental problems and food safety compared to conventional farmers. Additionally, member farmers in this study saw organic agriculture as one of the most viable alternatives to industrial large-scale agriculture (Broad & Cavanagh, 2012; Duram, 1997; Glenna & Jussaume, 2006). Meanwhile, conventional farmers saw agricultural technical improvements as developed by international agricultural industry as a viable way of adaptation (Darnhofer et al., 2005) including GM crops and the use of chemical pesticides and fertilizers (Glenna & Jussaume, 2006; Hwang, 2008; Kings & Ilbery, 2010).

Yet, most of the organic farmers in this study had one important advantage over those in other studies, their active involvement in the very large consumer cooperatives. Thus, while conventional and member farmers were greatly concerned about food safety under the global industrial food systems, member farmers were much more hopeful about the feasibility of alternative food systems and the potential for food self-sufficiency in Korea, because of the support they derive from these consumer cooperatives.

The tremendous growth of organic agriculture in Korea has been influenced by the two major social events: the Fukushima nuclear accident in March 2011 and the referendum and mayoral election in Seoul in October 2011 where the debate around school lunch service for all students emerged as a key and defining election issue. The Fukushima nuclear accident has strongly influenced most Korean people who are much more sensitive about radioactive contamination of food. Many consumers joined

consumer cooperatives and purchased domestically produced organic foods, especially since these cooperatives inspect food for radioactivity contamination according to strict standards[5]. Indeed, Hansalim reported new memberships showed an annual increase of 8.2% during 2011 to 2013. Subsequently, in 2014, 191 households newly joined Hansalim memberships every day and as of March 2015, their memberships had exceeded 500,000 households (Hansalim, 2015). Furthermore, the number of organic farm households that joined Hansalim also increased 10.4%, from 1,892 to 2,048 farms during 2012 to 2013 and total 2,110 member farms in March 2015 (Hansalim, 2015). Land area in Korea planted in organic was 25,467 ha, the ninth largest among Asian countries in 2012 (Fibl & IFOAM, 2014). Meanwhile, as the Fukushima nuclear accident is still ongoing as large amounts of radioactive contaminated water often outflows to the sea and leaks to underground water (Kyunghyang newspaper, 2015).

After the Seoul mayoral election in 2011, free school lunch programs were launched across the nation and many local governments decided to provide environment friendly (organic or no-pesticide) domestic foods to schools In 2013, 8,315(72.6%) schools including elementary, middle, and high school provided their students environment-friendly domestic foods (Kim, 2014) . The provincial and local governments established the Environment-Friendly Free School Lunch Centre to supply organic or no-pesticide agricultural products to all these school. The adoption of these school lunch programs spurred many to develop alternative direct market systems and to expand the organic agricultural market share in Korea.

[5] Korean consumer cooperatives apply 8Bq/kg for adults and 4Bq/kg for infants as standards for cesium 134 and cesium 137, while Korean government applies 100 Bq/kg.

Recently, the Korean government and KAC announced a plan to provide limited contract cultivation systems for Chinese cabbage, onion, radish, red pepper, and garlic for effective manage demand and supply. The KAC will guarantee farmers 80% of average year prices when food prices collapse (Kukmin-Ilbo, 2015). Although KAC restricts the number of farmers that can participate in these contracts, the plan seems to be influenced by the contract cultivation practices between consumer cooperatives and member farmers for eliminating food price volatility and financial uncertainty for farmers.

These results indicate that farmers want to substantially reduce the distance between farmers and consumers, which generally amounts to six steps in Korea (Jeon et al., 2009). This has been a major farmer concern since the 1980s. A number of diverse attempts to promote direct marketing as a way of reducing these distances have recently occurred in Korea. Several provincial governments (e.g. Chungcheongnam-do, Jeollabuk-do) have launched farmers markets and direct supply systems from farm to school for school lunch programs since 2011. Some farmers have established online markets to connect directly with consumers. Institutional foods buying in the form of universal lunch programs, soup kitchens, and contracts with corporations are also growing. Yet, these results show that consumer cooperatives have also emerged as one of the most important forms of direct marketing and ways of reducing the need for middlemen and that it is working for member farmers and consumers alike.

Nevertheless, these direct market systems still only represent very small parts of the larger food distribution system in Korea, and thus, farmers and consumers continue to

depend on the large industrial food distribution systems including the conventional farmers in this study. Koreans perceive that they will continue to depend upon foreign countries for their foods (Chapter 3). However, this global agri-food system is still characterized be food price volatility, threats food safety, and declines agriculture and rural community. Controversial enough for consumers that were surveyed in this research (Chapter 4), this global system is even more unpopular with both conventional and member farmers. Opening markets and the elimination of any protection for rural communities have facilitated the decline of agriculture and rural regions in Korea. The Korean government had also eliminated subsidies and neglected to compensate farmers for the multifunctionality of agriculture (Lee, 2011).

Korean agri-food activists and experts argue that government agricultural policies promoting chemical-input industrial farming contribute to the decline of domestic agriculture and rural communities. Other studies also indicate that failures to reform food distribution systems, ineffective management of KAC, and corruption and unethical behaviour within the agricultural sector including both national and regional governments, executives of KAC, and middlemen in food distribution systems also contribute to this decline (Lee, 2012). Indeed, over the few decades, Korean governments have spent huge amounts to revitalize agriculture and rural infrastructure. The aim of these programs is to adopt large-scale industrial farming and agricultural mechanization practiced by other technologically advanced countries in the Global North. However, these policies are inappropriate in Korea due to its small land area and mountainous geographic features. As a result of these policies, farmers have accumulated huge debt

due to purchasing ineffective equipment and chemical inputs (Agriculture & Peasant Policy Institute, 2010).

Agri-food activists and experts argue that there are other more appropriate responses to the decline of agriculture in Korea. Participants in this study recommended the adoption of agroecological farming practices and the complete reform of agricultural distribution systems. However, many barriers exist to meaningful agricultural reform that reflect the political and social dimensions of the existing agricultural sector and the resistance of the many who already benefit from these existing systems. In general, Korean government allocates a large proportion of the budget to agriculture every year and the Korean public agrees that this money should be spent on agriculture and rural communities. However, this investment fails to improve domestic agriculture and increase farmer incomes since much of it is used to support the KAC (Lee, 2012; Agriculture & Farmer Policy Institute, 2014). In this regard, consumer cooperatives represent a much more substantial agricultural reform and a meaningful alternative to the conventional agri-food system in Korea. The Korean government should proactively adopt these ethical and effective initiatives to avoid more radical resistances on the part of the agri-food peasant movements or for that matter the complete collapse of rural communities across the country.

Figure 5.6: Wonjoo Dawn Market, a Farmer's market, in Wonjoo-si, Gangwon-do, opening at 4-9 a.m. from April to December (http://wjdawnmarket.wjgarosu.com/m/) (Photo credit: Soon-won Hwang)

5.5. Conclusions

This chapter examined conventional and member farmer attitudes towards the global agri-food system, rural concerns, and governmental agricultural policies. Although both conventional and organic farmers in this study were very concerned about the future of Korean agriculture and rural communities, member farmers were more aware of alternative food systems, food safety, food self-sufficiency, and agricultural environmental issues. Two social events, the Fukushima nuclear accident and the referendum about adoption of free school lunch program in 2011, spurred conventional farmers to start applying organic farming practices. However, Korean agriculture and the

rate of food self-sufficiency still continue to decline. The Korean government has established food supply policies such as the exploitation of agricultural land in foreign countries and establishing procurement systems for foreign grain. Agricultural activists and experts criticized that these government policies are impractical and unjust. Moreover, these policies support agricultural industry rather than millions of remaining Korean small-scale farmers. In this regard, many were pessimistic about the future of Korean agriculture.

However, the circumstances surrounding the global agri-food system is also changing. The WTO DDA has been unable to address widespread concerns, especially as they relate to the Global South and, instead, food sovereignty movements lead by rural peasants and Indigenous people have spread around the world. Some experts have proposed a new approach to agricultural reform, sustainable intensification, in order to avoid the collapse of agriculture. The Korean government should consider such sustainable approaches to agriculture as reflected by the consumer cooperatives in this study, approaches that at integrate and at once reflect the importance of the environment, economic resources, animal and human welfare, food security, and the health and wellbeing of rural communities.

References

Agriculture & Peasant Policy Institute (2014). *How to reform Korean Agricultural Cooperatives?* Assembly Policy Report, J. Shin (Ed.). Seoul: APPI. [In Korean]

Agriculture & Peasant Policy Institute. (2010). *Rural poverty and policy*. Seoul: APPI. [In Korean]

Anderson, A. (2011). Organic food and the plural moralities of food provisioning. *Journal of Rural Studies*, 27(4), 440-450.

Anderson, K. (2010). Globalization's effects on world agricultural trade, 1960-2050. *Philosophical Transactions of the Royal Society B*, 365(1554), 3007-3021.

Best, H. (2008). Organic agriculture and the conventionalization hypothesis: A case study from West Germany. *Agriculture and Human Values*, 25(1), 95-106.

Bonanno, A. (2004). Globalization, transnational corporations, the state, and democracy. *International Journal of Sociology of Agriculture and Food*, 12, 37-48.

Broad, R. & Cavanagh, J. (2012). The development and agriculture paradigms transformed: Reflections from the small-scale organic rice fields of the Philippines. *The Journal of Peasant Studies*, 39(5), 1181-1193.

Brook, R. & McLachlan, S. (2006). Factors influencing farmers' concerns regarding bovine tuberculosis in wildlife and livestock around Riding Mountain National Park. *Journal of Environment Management*, 80(2), 156-166.

Buck, A., Rijn, I., Rolling, N. & Wossink, G. (2001). Farmer's reasons for changing or not changing to more sustainable practice: An exploratory study of arable farming in the Netherlands. *The Journal of Agricultural Education and Extension*, 7(3), 153-166.

Burch, D. & Lawrence, G. (2005). Supermarket own brands, supply chains and the transformation of the agri-food system. *International Journal of Sociology of Agriculture and Food,* 13(1), 1-18.

Burnham, K. & Anderson, D. (2002). *Model selection and multimodel inference: A practical information-theoretic approach* (2nd Edition). Springer: New York.

Charles, H., Godfray, J. & Garnett, T. (2014). Food security and sustainable intensification. *Philosophical Transactions of the Royal Society B*, 369(1639), 20120273.

Choi, J., Woo, B. & Hwang, Y. (2010*). A study on conceptualization of food self-sufficiency rate and re-establishing its target in Korea*. Seoul: Korea Rural Economic Institute. [In Korean]

Darnhofer, I., Schneeberger, W. & Freyer, B. (2005). Converting or not converting to organic farming in Austria: Farmer types and their rationale. *Agriculture and Human Values*, 22(1), 39-52.

Dixon, J. (2003). Authority, power and value in contemporary industrial food systems, *International Journal of the Sociology of Agriculture and Food,* 11(1), 31-39.

Duram, L.A. (1997). A pragmatic study of conventional and alternative farmers in Colorado. *Professional Geographer*, 49(2), 202-213.

Erik, S. (2002). Agriculture, organic farms reap many benefits. *Science,* 296(5573), pp. 1589.

FAO. (2014). *The state of food insecurity in the world 2013: The multiful dimension of food security*. Available at www.fao.org/docrep/018/i3434e/i3434e00.htm

FiBL and IFOAM. (2014). *The World of organic agriculture: Statistics and emerging trends 2014*. Rheinbreitbach: FiBL and IFOAM.

Friedland, W.H. (2004). Agrifood globalization and commodity systems. *International Journal of Sociology of Agriculture and Food,* 12, 5-16.

Garnett, T., Appleby, M. C., Balmford, A., Bateman, I. J., Benton, T. G., Bloomer, P., Burlingame, B., Dawkins, M., Dolan, L., Fraser, D., Herrero, M., Hoffmann, I., Smith, P., Thornton, P. K., Toulmin, C., Vermeulen, S. J., & Godfrey, H. C. J. (2013). Sustainable intensification in agriculture: Premises and policies, *Science,* 341(6141), 33-34.

Gilbert, C. & Morgan, C. (2010). Food price volatility. *Philosophical Transactions of the Royal Society B*, 365(1554), 3023-3034.

Glenna, L. & Jussaume, R. (2006). Organic and conventional Washington State farmers' opinions on GM crops and marketing strategies. *Renewable Agriculture and Food Systems*, 22(2), 118-124.

Godfray, H.C.J, Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Nisbett, N., Pretty, J., Robinson, S., Toulmin, C., & Whiteley, R. (2010). The future of the global food system. *Philosophical Transactions of the Royal Society,* B365(1554), 2769-2777.

Godo, Y. & Takahashi, D. (2012). *Evaluation of Japanese agricultural policy reforms under the WTO Agreement on Agriculture*. Paper presented at International Association of Agricultural Economists Triennial Conference.

Goldberger, J. (2011). Conventionalization, civic engagement, and the sustainability of organic agriculture. *Journal of Rural Studies*, 27(3), 288-296.

Goodman, D. (2000). Organic and conventional agriculture: Materializing discourse and agro-ecological managerialism. *Agriculture and Human Values*, 17(3), 215-219.

Grant, J. H. & Boys, K. A. (2012). Agricultural trade and the GATT/WTO: Does membership make a difference? *American Journal of Agricultural Economics*, 94(1),1-24.

Guptill, A. (2009). Exploring the conventionalization of organic dairy: Trends and counter-trends in upstate New York. *Agriculture and Human Values*, 26(1), 29-42.

Guthman, J. (2004). The trouble with 'organic lite' in California: A rejoinder to the 'conventionalization' debate. *Sociologia Ruralis*, 44(3), 301-316.

Hansalim. (2015). *2014 Hansalim Annual Report*. Retrieved from http://www.hansalim.or.kr/?page_id=21031. [In Korean]

Hansalim. (2013). *Hansalim 2013 Annual Report*. Retrieved grom http://www.hansalim.or.kr/wp-content/uploads/2014/03/2013 [In Korean]

Hatcher, L. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling* (3rd ed.). SAS Institute Inc.: Cary, NC.

Hwakes, S. & Plahe, J. K. (2012). Worlds apart: the WTO's Agreement on Agriculture and the right to food in developing countries. *International Political Science Review*, 34(1), 21-38.

Headey, D. & Fan, S. (2010). *Reflections on the global food crisis: How did it happen? How has it hurt? And how can we prevent next one?* International Food Policy Research Institute: Washington, D. C.

Hojjat, T. (2009). Global food crisis-Food versus fuels. *Competition Forum*, 7(2), 419-426.

Hwang, S (2008). *Farmer and consumer attitudes towards GM foods in South Korea.* MEnv Thesis, University of Manitoba, Winnipeg, Manitoba, Canada.

Hwang, Y. (2013). *Food demand and supply*. Seoul: KREI . [In Korean]

Izumi, B., Wright, W., & Hamm, M. (2010) a. Market diversification and social benefits: Motivation of farmers participating in farm to school programs. *Journal of Rural Studies,* 26(4), 374-382.

Izumi, B., Wright, W., & Hamm, M. (2010) b. Farm to school programs: Exploring the role of regionally-based food distributors in alternative agrifood networks. *Agriculture and Human Values*, 27(3), 335-350.

Jeon, C., Choi, B., & Kim, D. (2009). *An evaluation of agricultural distribution system and efficiency improvement.* Seoul: KREI. [In Korean]

Jeong, E., Kim, D., & Kim, M. (2011). *The economic fruits and policy tasks of consumer cooperatives in Korea*. Seoul: KREI. [In Korean]

Jeong, H. & Moon, D. (2013). *Response strategy to the abolishment of low-pesticide agricultural product certification*. Seoul: KREI. [In Korean]

Jonge, J., Trijp, H., Goddard, E. & Frewer, L. (2008). Consumer confidence in the safety of food in Canada and the Netherlands: The validation of a generic framework. *Food Quality and Preference,* 19(5), 439-451.

Kako, T. (2009). *Sharp decline in the food self-sufficiency ratio in Japan and its future prospects.* Paper presented at the International Association of agricultural Economists 2009 Conference, http://purl.umn.edu/51570.

Kim, C., Jeong, H. & Moon, D. (2012). *Production and consumption status and market prospects for environment-friendly agri-foods*. Seoul: KREI. [In Kprean]

Kim, J., Kim, S. & Jeong, W. (2007). *Perception of the members of Consumer cooperatives*. Seoul: ICOOP Consumers' Cooperative Institute. [In Korean]

Kim, Y. (2014). *Distribution system of environment-friendly foods to schools*. Paper presented at the Symposium for the reform of Distribution system of environment-friendly school lunch 2014.

Kings, D. & Ilbery, B. (2010). The environmental belief systems of organic and conventional farmers: Evidence from central-southern England. *Journal of Rural Studies*, 26(4), 437-448.

Klonski, K. (2000). Forces impacting the production of organic foods. *Agriculture and Human Values*, 17(3), 233-243.

Koesling, M., Ebbesvik, M., Lien, G., Flaten, O., Valle, P. & Arntzen, H. (2004). Risk and risk management in organic and conventional cash crop farming in Norway. *Food Economics-Acta Agriculturae Scandinavica, Section C*, 1(4), 174-182.

Konefal, J., Mascarenhas, M., & Hatanaka, M. (2005). Governance in the global agro-food system: Backlighting the role of transnational supermarket. *Agriculture and Human Values,* 22(3), 291-302.

Korea Biosafety Clearing House. (2013). http://www.biosafety.or.kr/03-data/sub0303.asp

Kyunghyang newspaper. (2015). Japan Fukushima nuclear leaked747 tonnes of high radioactive contaminated water to underground water. Retrieved from http://news.khan.co.kr/kh_news/khan_art_view.html?artid=201503110924501&code=970203 [In Korean]

Kukmin newspaper. (2015). Korean Agricultural Cooperatives and government adopt contract cultivation. Retrieved from

http://news.kmib.co.kr/article/view.asp?arcid=0923045100&code=11151600&cp=nv [In Korean]

Lee, H. (2012). *Agriculture in Korea: Solution for hope*. Korean Farmer and Fisher Newspaper: Seoul. [In Korean]

Lee, H. (2011). *Is it impossible for food price support policies?* Agriculture and Farmer Policy Institute, Issue Report 55. [In Korean]

Lee, S., Ahn, S. & Jeong, J. (2011). Trends and implication of procurement for foreign grain. *NongHyup Economic Research Institute*. Available at http://www.nheri.re.kr [In Korean]

McCalla, A. (2009). World food prices: Causes and consequence. *Canadian Journal of Agricultural Economics,* 57(1), 23-34.

Moon, W. (2011). Is agriculture compatible with free trade? *Ecological Economics*, 71, 14-24.

Mzoughi, N. (2011). Farmers adoption of integrated crop protection and organic farming: Do moral and social concerns matter? *Ecological Economics,* 70(8), 1536-1545.

Ponisio, L. C., M'Gonigle, L. K., Mace, K. C., Palomino, J., Valpine, P., & Kremen, C. (2015). Diversification practices reduce organic to conventional yield gap. *Proceedings Royal Society B*, 282(1799). 20141396.

Raynolds, L. (2004). The globalization of organic agro-food networks. *World Development*, 32(5), 725-743.

Ramphul. (2011). WTO Agreement on Agriculture and South Asia's farm trade. *South Asian Survey*, 18(1), 27-62.

Seufert, V., Ramamkutty, N., & Foley, J. A. (2012). Comparing the yields of organic and conventional agriculture. *Nature*, 485(7397), 229-234.

Surtherland, L. (2013). Can organic farmers be 'good farmers'? Adding the 'taste of necessity' to the conventionalization debate. *Agriculture and Human Values,* 30(3), 429-441.

Tarasofsky, R. & Palmer, A. (2006). The WTO in crisis: Lessons learned from the Doha negotiations on the environment. *International Affairs*, 82(5), 899-915.

Timmer, P. (2005). Food security and economic growth: An Asian perspective. *Asian-Pacific Economic Literature*, 19(1), 1-17.

Tuomisto, H., Hodge, I., Riordan, P. & Macdonald, D. (2012). Does organic farming reduce environmental impacts? A meta-analysis of European research. *Journal of Environmental Management*, 112, 309-320.

Tsuri, M. (2011). Agricultural economic policy in Japan: Supply and demand approaches of the food self-sufficiency rate. *Macro Review*, 23(22), 63-81.

Uematsu, H. & Mishra, A. (2012). Organic farmers or conventional farmers: where's the money? *Ecological Economics*, 78, 55-62.

Varshney, A. (1993). Strategy in industrial development: India and South Korea. India International Centre Quarterly, 20(4), 1-18.

Vagneron, I. & Roquigny, S. (2011). Value distribution in conventional, organic and fair trade banana chains in the Dominican Republic. *Canadian Journal of Development Studies*, 32(3), 324-338.

Wittman, H. (2009). Reworking the metabolic rift: La Via Campesina, agrarian citizenship and food sovereignty. *The Journal of Peasant Studies*, 36(4), 805-826.

Wittman, H., Beckie, M. & Hergesheimer, C. (2012). Linking local food systems and the social economy? Future roles of farmers' markets in Alberta and British Columbia. Rural Sociology, 77(1), 36-61.

Yamashita, K. (2006). Food and agriculture problems for Japan and the World in the twenty-first century.*Asian-Pacific Review*, 13(1), 1-15.

Yoon, Y., Lee, B. & Pack, J. (2013). The age effect on income inequality of farm households. *Agricultural Economy*, 36(3). 33-51.

CHAPTER 6

ROLES OF CONSUMER COOPERATIVES IN ADDRESSING RURAL DECLINE IN SOUTH KOREA

ABSTRACTS

Introduction: Consumer cooperatives are growing tremendously in popularity in South Korea, reflecting wide scale public concerns regarding food safety. The objectives of this study were to identify the roles of consumer cooperatives in addressing an ongoing food safety crisis and concomitant rural decline. Further, this chapter explored the potential role that consumer cooperatives play in promoting domestic agriculture as a meaningful alternative to the global industrial food system.

Methods: Member consumers and farmers from four consumer cooperatives were surveyed using a questionnaire composed of both Likert-scaled and open-ended questions. The three-page questionnaire was constructed to examine participant motivations for joining consumer cooperatives, benefits and risks of consumer cooperatives, and roles of consumer cooperatives in addressing food-related concerns.

Results: From the beginning, the members of Korean consumer cooperatives have practiced food justice and the ethical consumption and production of foods. Member consumers in this study joined consumer cooperatives in order to better access safe food, to better protect the environment, and to better support farmers and rural communities. Consumer cooperatives provided various benefits for member farmers. They were able to make contracts with consumer cooperatives that provided guaranteed access to markets and substantial price premiums. Indeed, most earned a 11-30% higher profit margin than equivalent sales with large retail markets. Further, close contact between member consumers and farmers allowed both groups to better communicate any concerns. Member consumers recognized that consumer cooperatives compensate farmers more

fairly and thus better support small-scale family farms. They were also encouraged to learn about agriculture and rural issues through the diverse social events and educational programs provided by consumer cooperatives. However, consumer cooperatives were also criticized by food activists and peasant movement activists as catering to economically privileged consumers. In addition, consumer cooperative movements were seen as focusing on individualistic responses to food-related concerns and rural decline. **Conclusions**: Despite some shortcomings, consumer cooperatives showed an adequate frame for building alternative food systems by facilitating cooperation between consumers and farmers and at least beginning to address the decline of domestic agriculture in Korea. In this respect, they represent an effective way of addressing some of the negative impacts of the global agri-food system.

Keywords: Alternatives, benefits and risks, Korean **c**onsumer cooperatives, member farmers, price premiums.

6.1. Introduction

Cooperatives can be defined as "autonomous association(s) of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise" (International Cooperative Alliance, 2014). The Society Rochdale Equitable Pioneers (Rayner & Ennew, 1987) in England is widely regarded as the origin of the modern cooperative, and was formed in 1844 by 28 artisans in order to better access basic foods at lower prices (International Cooperative Alliance, 2014). The principles of cooperatives have long been discussed (Bancel, 2014; Oczkowski et al., 2013), these originally announced in 1937 and subsequently amended in 1966 and 1995. The international Cooperatives Alliance posits the seven underlying principles as: voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training, and information; cooperation among cooperatives; and concern for community (International Cooperative Alliance, 2014). Common themes that emerge from the three versions of these principles include; open and voluntary membership, democratic member control, and promotion of education. As cooperatives are member-owned enterprises, they primarily work to achieve the economic and social needs of their members. In the 1995 declaration, concern for community was stipulated as the final principle of cooperatives, in that cooperatives work for the sustainable development of both members and their communities (Bancel, 2014).

The UN declared 2012 as the International Year of Cooperatives, recognizing their value in reducing poverty, creating jobs, and working for social equity (United

Nations, 2012). They announced that 'cooperative enterprises build a better world' and have since worked to increase general awareness, increase growth, and establish appropriate governmental policies that can help to build political and legal frameworks for the creation and development of cooperatives in many nations around the world. These activities have facilitated the development of new cooperatives as social and economic initiatives that served the public good and facilitated the wide-scale recognition of their key roles in supporting social and economic development (Birchall, 2004; United Nations, 2012). As of 2013, the International Cooperatives Alliance reported 18.8 million members of cooperatives in Africa, 279 million in America, 70.8 million in Europe, and, of special interest here, 349 million in Asia. (International Cooperatives Alliance, 2013).

Many consumer cooperatives especially those in the EU and North America have evolved into investor-owned businesses as they increase in size (Birchall, 2000). Such organizations have been criticized for sometimes losing sight of their intrinsic missions and principles and for neglecting relationships with members as this growth has occurred (Birchall, 2004; Jang, 2014).

Consumer cooperatives in South Korea (herein Korea) have also rapidly grown since late 1980s. The Korean government enacted the Fundamental Law on Cooperatives in December 2011. In that year alone, 3,045 cooperatives were established, 60% of them being small entrepreneurial cooperatives (Jang, 2014); some of the largest and most influential of these have been consumer cooperatives, the focus of this chapter.

The goal of Korean consumer cooperatives has generally been to collectively purchase and distribute environment-friendly agricultural products. On one hand they educate consumers and increase awareness of food production and provide credible information about cultivation, processing, and distribution as well as sustainable and safe products. On the other hand, they offer organic farmers effective distribution routes, market security and premium prices, and financial stability (Jang, 2012). That they simultaneously address the needs of consumers and farmers helps explain their rapid growth and success across the country. Currently, the two large consumer cooperatives in Korea, Hansalim and iCoop, each have over 2,000 employees. Unlike their counterparts in the EU and North America, Korean consumer cooperatives have managed to achieve effective and stable management and growth while retaining their principles and credibility with both consumers and farmers (BōōK & Ilmoen, 1989). These consumer cooperatives also represent a potentially important way of addressing rural decline in Korea, a decline that many attribute to the impacts of the global industrial food system (Lee, 2014).

Agriculture in Korea has continued to decline with the advent of the global agri-food system since the 1970s, especially as shaped by the WTO regime 20 years later. Indeed, the removal of trade barriers in agriculture and the opening of food markets in Korea, along with most other countries around the world, have emerged as one of the main targets of transnational agri-industry that still dominates the global food distribution system (Hur & Pack, 2012; Thompson & Cowan, 2000). The Korean government has signed Free Trade Agreements (FTA) with 49 nations including Chile, Singapore, the

European Free Trade Association (EFTA)[6], the Association of Southeast Asian Nations (ASEAN)[7], India, the EU, Peru, the US, and Turkey over the past 10 years and is, currently, negotiating with 21 other nations, notably China and Japan (Lee, 2014). Although much damage was minimized by a still-deadlocked World Trade Organization Doha Development Agenda (WTO DDA), the impact of Korea-Chile FTA on Korean agriculture over this 10 year period has already been significant. According to Moon et al. (2014), imports of agricultural products from Chile in 2013 were 11.3 X those in 2003. Meanwhile, exports of Korean agricultural products to Chile increased 7.5 X over this same time period (Moon et al., 2014). In reality, the total import of agricultural products by Korea has increased from 10.2 billion USD in 2003 to 30.2 billion USD in 2013. Accordingly, the market share of imported foods in Korea increased from 16.3% to 23% over this same period (Lee, 2014).

The Korean public has become increasingly concerned over food safety as related to the global industrial food system. Concerns include Bovine Spongiform Encephalitis (BSE), chronic avian influenza in poultry, contamination of foods and the environment by GMOs, and radioactive contamination of farmed fish and other agricultural products (Jeong, 2013). Many hundreds of thousands of Korean people protested imports of US beef by candlelight from May to August 2008 due to concerns about BSE (Lee et al., 2010). Although most participants in this resistance were unlikely to explicitly criticize the economic transformation of Korea, the movements still reflected underlying anti-neoliberal sentiments and even a desire to reorganize capitalistic social relations (Hong,

[6] The European Free Trade Association members are Iceland, Liechtenstein, Norway, and Switzerland.
[7] The Association of Southeast Asian Nations members are Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei Darussalam, Cambodia, Laos, Myanmar, and Vietnam.

2008; Lee et al., 2010). The rallies evolved into economic and political conflicts that extended beyond the protection of food safety, and Korean society has since divided into two major groups: proponents of neoliberal economic development and advocates for universal welfare and social safety (Kang, 2013; Lee et al., 2010). For the most part, members of consumer cooperatives reflect the values of the latter group. They proactively organized candlelight rallies after the Fukushima nuclear accidents in 2011 calling for the government to ban food imports from Japan and to strictly enforce these regulations (Hansalim Mosim & Salim Institute, 2012). Because of their general distrust of government policies and responses to the food safety crisis, members founded the Civil Radiation Detection Centre in solidarity with civil society organizations, and purchased equipment for monitoring radioactive contamination in food (Korea JoongAng Daily, 2014). Consumer cooperatives and civil organizations, in turn, established strict standards as well as regulations and detection methods of such radioactive contamination (Hansalim Mosim & Salim Institute, 2012).

Although consumer cooperatives in Korea have shown tremendous growth over the last 20 years, they have received very little attention outside of Korea. The major goal of this study was to identify roles of consumer cooperatives in addressing the food safety crisis and the ongoing decline of domestic agriculture and rural communities in Korea. I also explored the benefits for and concerns of consumers and farmers associated with these cooperatives. Finally, I examined the potential role that consumer cooperatives might play as an alternative to and in resisting the global industrial food system.

6.2. Methods

6.2.1. Study area

This study was conducted in South Korea (herein Korea) (Chapter 3 Figure 3.1.). The total GDP (Gross Domestic Product) of Korea was 832.5 billion USD and population was 48.747 million in 2009 (The World Bank, 2011). Food self-sufficiency for grain including livestock feed continues to drop in Korea from 29.7% in 2000 to 26.7% in 2009 (Choi et al.,, 2010). Korea imported 8.11 million tonnes of maize, 5.52 million tonnes of wheat, and 1.23 million tonnes of soybean in 2012 (Table 6.1). In 2010, the largest imports of agricultural products originated from the US, followed in descending order, by China, Australia, and Brazil (Korea International Trade Association, 2011).

Table 6.1: Korean imports of maize, wheat, soybean, and rice in 2012 and associated food self-sufficiency in 2001 and 2012.

Commodity	Quantity (tons)	Food self-sufficiency (%)	
	2012	2001	2012
Maize	8,112,000	0.8	0.9
Wheat	5,517,000	0.1	0.7
Soybean	1,232,000	7.7	9.5
Rice	681,000	> 100	86.1

Source: Hwang, 2013

The diets of Koreans have also changed substantially over the last few decades; consumption of rice and vegetables has declined sharply while that of meat and fruit has increased (Table 6.2).

Table 6.2: Per capita food consumption (kg/person/year) in Korea in 2001 and 2009

	Rice	Wheat	Vegetables	Fruit	Meat	Milk
2001	92.8	34.4	164.4	41.9	38.2	51.4
2009	80.5	32.2	148.9	48.3	42.9	52.8

Source: Hwang, 2013

Organic agriculture has grown remarkably over the last 20 years in Korea. While the number of total farm households in Korea decreased from 1.38 million in 2000 to 1.15milliom in 2012, organic farm households increased 47X, from 353 to 16,733 over this time period. Although the total farm area in Korea declined from 1.89 million ha in 2000 to 1.73 million ha in 2012, organic farm area also increased 86X, from 296 ha in 2000 to 25,467 ha in 2012.

6.2.2. Data collection

This mixed-methods study design integrated both quantitative and qualitative data collection and analysis. It was approved by the Joint-Faculty Research Ethics Board at the University of Manitoba (J2009: 085).

Consumers and farmers as members of consumer cooperatives (herein member consumers and member farmers) were surveyed using a questionnaire composed of both Likert-scaled and open-ended questions. The three-page questionnaire was created in order to examine participant motivations for joining consumer cooperatives, benefits and shortcoming associated with consumer cooperatives, and roles of consumer cooperatives in addressing food concerns. Member consumer and farmer data were collected from

four consumer cooperatives: Dure cooperatives, Happy-Centre cooperatives, Hansalim, and iCoop cooperatives. Interviews were conducted from July 2009 to March 2010. In total, 570 questionnaires were collected, comprising 452 member consumers and 118 member farmers (Table 6.3).

All surveyed groups showed a gender and age bias. Among member consumer respondents, 92.7% were women and 70.3% of respondents were 30-45 yoa because most members of consumer cooperatives in Korea are women and 84% are 30-44 yoa (Kim, J., Kim, S., & Jeong, W., 2007). Meanwhile, 92.8% of member farmers were male, reflecting their usual role as farm representatives in most rural areas in Korea (Table 6.4).

Table 6.3: Numbers of collected questionnaires

Consumer cooperatives	Consumers	% of total	Farmers	% of total
iCoop	160	35.4%	33	28.0%
Hansalim	137	30.3%	29	24.6%
Dure	62	13.7%	48	40.7%
Happy-Center	76	16.8%	NA	-
Others	17	3.8%	8	6.8%
Total	452	100%	118	100%

Semi-directed interviews were also conducted with stakeholders from July to October 2009. Eleven people were interviewed including five representatives from consumer cooperatives (Dure, Eco, Hansalim, Happy-Center, and iCoop Cooperatives), four civil society organizations (Korea Green Foundation, School Lunch, Korean Womenlink, and Korean Women Peasant Association), one academic organization (Agricultural Cooperatives College), and one government institute (Korea Rural

Economic Institute). Each interview took 1 -2 hours to complete. Participants were asked about the positive and negative implications of the global agri-food system, the rallies protesting the importation of the US beef, local food systems, and any implications of the consumer cooperatives movement. The interviews were audio recorded with permission, and subsequently transcribed and translated in their entirety into English.

6.2.3. Data analysis

Demographic data such as age, income, education level, financial situation, family size, proportion of food expenditures were recorded and examined as means, standard errors, and proportions. Differences in any variance of demographic data between member consumers and member farmers were analyzed using t-tests (SPSS 13.0).

Qualitative data in this study were collected from stakeholder interviews and from the four open-ended questions included in the questionnaire. Emerging themes from these qualitative data were identified and matched with those arising from Likert-scaled responses (Johnson et al., 2007).

Factor analysis (varimax rotation) was used to identify the factor structure underlying the quantitative data set (SAS V9.2). Any variables (Likert scale questions) with at least 0.4 loading value were assigned to a factor. Cronbach alpha coefficients were calculated to test the reliability of the variables for each factor. All Cronbach alpha values were >0.6 and were considered satisfactory for internal consistency of a scale and appropriate for variable reduction (Hatcher, 1994)

Table 6.4: Comparative socio-demographics of member consumers and member farmers of the four consumer cooperatives

Variables	Consumer(n=452)		Farmer (n=118)		Sig.[a] (2-tailed)
	Proportion (%)	Mean(SE)	Proportion (%)	Mean(SE)	
Age					
15-30	3.3	41.7 (0.32)	2.7	48.2 (0.90)	0.000
31-45	70.3		41.8		
46-60	25.3		46.4		
Over 60	1.2		9.1		
Financial					
Not enough (1)	3.6	3.08 (0.04)	3.7	2.90 (0.08)	0.044
Tight (2)	18.9		26.2		
No extra money (3)	44.8		51.4		
Extra money (4)	32.4		16.8		
Enough (5)	0.2		1.9		
Annual income					
Less than $7K (1)	2.1	4.30 (0.06)	1.8	3.63 (0.11)	0.000
$7K - $14,999 (2)	5.8		10.7		
$15K - $29,999 (3)	18.6		38.4		
$30K - $44,999 (4)	29.2		28.6		
$45K - $59,999 (5)	24.6		14.3		
Over $60K (6)	19.7		6.3		
Family size					
1 person (1)	3.1	3.73 (0.04)	3.5	3.92 (0.11)	0.113
2 people (2)	4.9		9.6		
3 people (3)	20.9		20		
4 people (4)	59.1		27.0		
> 5 people (5)	12.0		40		
% Food Expenditure					
Less than 10% (1)	5.5	3.06 (0.06)	25.7	2.56 (0.14)	0.002
10 - 19% (2)	26.7		37.1		
20 - 29% (3)	35.2		17.1		
30 - 39% (4)	22.5		8.6		
40 - 49% (5)	6.9		4.8		
Over 50% (6)	3.2		6.7		
Education					
No high school (1)	1.6	4.50 (0.049)	17.7	3.35 (0.14)	0.000
Some high school (2)	0.2		3.5		
High school (3)	21.2		33.6		
Collage (4)	9.5		8.9		
University (5)	57.9		36.3		
Post graduate (6)	9.7		-		
Gender					
Female	92.7		7.2		
Male	7.3		92.8		

[a] Significant differences in means between the two groups according to t-tests (SPSS 13.0).

6.3. Results

6.3.1. Motivations for participating in consumer cooperatives

Consumer motivations for participating in consumer cooperatives

Most member consumers in this study joined consumer cooperatives because of concerns regarding foods safety and family health (Table 6.5). It seems that most participants recognized that consumer cooperatives provide relatively safe foods. Meanwhile, other member consumers referred to larger societal issues such as protecting the environment, support for rural, and consumer ethics (Table 6.5). However, only five consumers (0.8%) mentioned direct marketing, suggesting most were likely unaware of the wide-scale potential of alternative food systems as a whole.

Table 6.5: Consumer motivations for joining consumer cooperatives

Reasons	Frequency [a]	%
Purchase safe foods	285	46.3%
Protect environment	72	11.7%
Concern about family health	65	10.6%
Support rural communities	62	10.1%
Purchase organic foods	40	6.5%
Consumer ethics	30	4.9%
Treat eczema (atopic dermatitis)	28	4.5%
Reasonable prices	23	3.7%
Convenience	6	1.0%
Vitalize direct marketing	5	0.8%
Total	616	100%

[a] a: Frequency of answer (multiple answer), from the open-ended question, 'Why do you join consumer cooperatives?'

Results further showed that 51% of member consumers joined consumer cooperatives in response to recommendations by friends and relatives and 13% responded to introductions by member of other civil organizations. Others joined because of their proximity to consumer cooperatives (13%), initiated their own memberships (10%), joined in response to other member consumers (8%), or in response to media coverage (5%) (Table 6.6).

Table 6.6: How consumers came to join consumer cooperatives

	Frequency	%
Recommended by friends and relatives	69	51.5%
Introduced by members of civil organization	18	13.4%
Consumer cooperatives close to my home.	17	12.7%
Self-initiated	14	10.4%
Introduced by members of consumer cooperatives	10	7.5%
Information from TV and books	6	4.5%
Total	134	100%

Farmer motivations for participating in consumer cooperatives

Many farmers (34% of respondents) became members of consumer cooperatives when contacted by these organizations. At the beginning of each year, consumer cooperatives typically conduct outreach directly with farmers, rural communities, and farmer organizations about product availability, prices, quantity, and quality as well as potential farmer interest in becoming involved in some capacity. Other means for joining included other, friends, relatives, and recommendations from other cooperative members.

As with member consumers, social relationships played the central role in facilitating participation by farmers (Table 6.7).

Table 6.7: How farmers came to join consumer cooperatives

Participation	Frequency	%
Contacted by consumer cooperatives	19	33.9%
Rural organizations	19	33.9%
Introduced by friends and relatives	10	17.9%
Looking for distributors for organic products	5	8.9%
Introduced by the members of consumer cooperatives	3	5.4%
Total	56	100%

6.3.2. Benefits associated with consumer cooperatives

Benefits associated with consumer cooperatives for consumers

Member consumers indicated that the most important benefit arising from their involvement in consumer cooperatives was 'access to safe foods' followed, in descending order of importance, by 'access to organic foods' and 'knowing the origin of foods', the latter reflecting the direct relationship between farmers and consumers in these organizations (Table 6.8). In turn, the fifth and sixth ranked benefits were 'locally produced foods' and 'support for farmers' respectively. It thus appears that rural concern was less important for consumers than their own safety and health. It is not surprising that food price was the least important benefit for member consumers, in part because of the relatively high prices that they paid for these products. Indeed, income and financial status of member consumers in this study were higher than those of conventional

consumers (Chapter 4), and consumer cooperatives have been criticized as catering to privileged segments of society. Although consumer cooperatives have attempted to reduce prices by eliminating middlemen, they still remain relatively high. However, the price of organic foods in consumer cooperatives is much less expensive than price of equivalent products charged by large retail markers.

Table 6.8: Benefits of consumer cooperatives for member consumers

Benefits	Member consumers[a]
Food safety	1.64
Organically produced food	2.88
Knowing the origin of food	5.45
Freshness	6.04
Locally produced food	6.06
Support for farmer	6.16
Humanely treated livestock	6.23
Good taste	7.13
Convenience	7.94
Price	8.26

[a] 1=Most important to 10=least important

Benefits associated with consumer cooperatives for farmers

Consumer cooperatives establish contracts with farmers regarding at the beginning of each year. Consequently, member farmers in this study indicated that the primary benefit they encountered was the provision of a guaranteed market (49% of respondents). Other benefits, in descending order of importance, included a price

premium for their products (23.4%), as farmers are able to negotiate these premiums with consumer cooperatives and an ability to 'connect with consumers' (17%) (Table 6.9).

> *"Member consumers and member farmers think alike and I am able to produce safe foods and continue to provide to consumer cooperatives."*
>
> *(Member farmer: Hansalim #11)*

In addition to providing for human health and wellbeing, these benefits extended to the environment as a whole.

> *"Additionally, it is the fundamental role of agriculture to protect life and environment."*
>
> *(Member farmer: Hansalim #11)*

Table 6.9: Benefits of consumer cooperatives for member farmers

Benefits	Frequency	%
Guaranteed market for products	38	49.4%
High price of products	18	23.4%
Connections with consumers	13	16.9%
Confidence for myself as farmers	5	6.5%
Market for organic products	3	3.9%
Total	77	100%

Member farmers were optimistic about the financial support provided by consumer cooperatives. Thus, most (76.4%) member farmers in this study agreed that their financial situation had improved since becoming involved.. Moreover, the great majority (85.9%) indicated that selling their products to consumer cooperatives was more profitable selling to large retailers (Table 6.12). Indeed, 27.8% of member farmers were

able to get 11-20% price premium compared to sales with Agricultural Cooperatives or large retail market and 20.6% achieved premiums of 21-30% (Table 6.10). Although, many felt that they deserved even higher premiums (>31%), these desired premiums were roughly equivalent to those that participants were already receiving (e.g. 10.3% actual vs. 12.4% desired and 6.2% actual vs. 10.3% desired for price premiums that were 31-50% and 51-100%, respectively).

Table 6.10: Price premiums for farmers in consumer cooperatives compared to prices in state-run Agricultural Cooperatives or in large retail markets

	Difference in profit margin			Desired profit margin		
	Frequency	%	Rank	Frequency	%	Rank
None	2	2.1%	8	9	9.3%	5
1 - 10%	15	15.5%	3	3	3.1%	7
11- 20%	27	27.8%	1	23	23.7%	2
21- 30%	20	20.6%	2	31	32.0%	1
31- 50%	10	10.3%	5	12	12.4%	3
51 – 100%	6	6.2%	6	10	10.3%	4
101 – 200%	1	1.0%	9	1	1.0%	8
>200%	3	3.1%	7	0	0%	9
Don’t know	13	13.4%	4	8	8.2%	6
Total	97	100%		97	100%	

6.3.3. Member perceptions of the roles of consumer cooperatives in addressing the rural crisis in Korea

Consumers

Member consumers were optimistic about the roles of consumer cooperatives that at once worked for member consumers and farmers. Thus, 96.4% of member consumers at least somewhat agreed that consumer cooperatives helped 'increase the safety of my foods'. But the great majority (93.2%) also agreed that consumer cooperatives encouraged people to explore rural issues and most (84.8%) recognized that they provided additional support for small-scale family farms. Most (79.3%) also agreed that farmers were fairly compensated by consumer cooperatives (Table 6.11).

Table 6.11: Member consumer perceptions of the roles of consumer cooperatives

	-/+ (%)[a]	N/DK(%) [b]	Mean(SE)[c]
Consumer cooperatives help increase the safety of my food.	0.2/96.4	2.7/0.7	6.3 (0.1)
Consumer cooperatives encourage people to explore rural issues.	1.4/93.2	4.7/0.7	6.2 (0.1)
Consumer cooperatives support small-scale family farms.	5.2/84.8	1.0/0.1	5.6 (0.1)
Farmers are fairly compensated by consumer cooperatives.	2.7/79.3	7.1/10.9	5.6 (0.1)

[a] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[b] N is 'Neutral', DK is 'Don't know'.
[c] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.

Farmers

Factor analysis was used better explain and understand differences in farmer attitudes towards risks associated with food systems. Two factors were extracted. Factor one reflected the roles of consumer cooperatives and factor two reflected the benefits of consumer cooperatives. Eigen-values for factors one and two were 4.21 and 1.37, respectively and the Cronbach coefficient alpha value was acceptable at 0.76 (Table 6.12). The great majority (92.5%) of member farmers in this study perceived that consumer cooperatives movement is one of the important solutions to the Korean rural crisis (Table 6.12). Additionally, most (89.6%) agreed that consumer cooperatives excelled at reflecting farmer concerns and that member consumers became more aware of and more concerned about farmers once becoming involved with consumer cooperatives. These results again reflect the direct and meaningful relationships between member consumers and farmers in these organizations.

Table 6.12: Factor analysis for member farmer attitudes towards consumer cooperatives

Factor Analysis (Cronbach Coefficient Alpha:0.76)	Factor loading		-/+ [a] (%)	N/DK[b] (%)	Mean (SE)[c]
	Fa 1	Fa 2			
Factor 1: Roles of consumer cooperatives (Eigen value: 4.21)					
Consumers are more concerned about me as a farmer since I have been involved in consumer cooperatives.	**0.82**		0/89.6	7.6/2.8	5.6 (0.1)
Consumer cooperatives movement is an important part of the solution of Korean rural crisis.	**0.77**		0.9/92.5	5.7/0.9	5.9 (0.1)
Consumer cooperatives reflect well the concerns of farmers.	**0.72**		2.9/89.5	6.7/1.0	5.5 (0.1)
Factor 2: Benefits of consumer cooperatives (Eigen value: 1.37)					
Selling to consumer cooperatives is more profitable for farmers than selling to large retailers.		**0.82**	2.8/85.9	10.4/0.9	5.7 (0.1)
My financial situation has improved since becoming involved in consumer cooperatives.		**0.73**	4.7/76.4	18.9/0	5.2 (0.1)
I feel positive about the future of consumer cooperatives.		**0.69**	4.0/90.1	5.9/0	5.7 (0.1)

[a] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[b] N is 'Neutral', DK is 'Don't know'.
[c] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'.

6.3.4. Member concerns about consumer cooperatives

The most significant criticism was that consumer cooperatives were elitist in that they catered to economically privileged consumers in society and arguably discriminated against the poor. Indeed, most (80.5%) member consumers in this study recognized that the high prices of products made it difficult for those living in poverty to afford food from consumer cooperatives (Table 6.14).

Table 6.13: Implementation of ethical principles of consumer cooperatives (%)

	Yes	No	DK[a]
My consumer cooperative(s) have educated me about food.	84.8	12	3.2
I recommend family and friends join to consumer cooperatives.	92.7	6.6	0.7
I participate in the operation of my consumer cooperatives	57.3	38.8	3.9
I would pay an extra 5% for food from the consumer cooperatives if this would be used to make their products more accessible to the poor.	66	16.3	17.7

[a] DK: 'Don't know'.

> *"Other research discovered that children having poorly educated parents or living in low-income families had high concentrations of heavy metals in their blood. Those children showed low learning ability. This means the class differential in society is made and reproduced through foods. That is why consumer cooperatives take into account how to offer safe foods to vulnerable people and these solutions offer potential for a sustainable society. Consumer cooperatives have to establish systems to maintain food safety. Consumer cooperatives should especially take into account the way they provide safe foods to the poor. For this, government should accept consumer cooperative proposals and establish supportive policies. If consumer cooperatives don't have plans to address the needs of vulnerable people, they will be regarded a serving the wants of the middle class."*
>
> *(Won-Gak Jung: iCoop)*

The higher prices of organic food will arguably limit the potential of these consumer cooperatives to transform the Korean food system as a whole, unless other means of increasing widespread access to these products are achieved by the cooperatives and government alike. Indeed, many (66%) member consumers indicated that they were willing to pay an additional premium whenever purchasing foods in

consumer cooperatives if it increased the accessibility of these foods to those living in poverty (Table 6.13).

In addition to these concerns, about one-third of member consumers had experienced low- quality products as provided by the consumer cooperatives and felt too much time was required to purchase food through the cooperatives (Table 6.14).

Table 6.14: Member consumer concerns about consumer cooperatives

	-/+ (%)[a]	N/DK (%)[b]	Mean(SE)[c]
High price of products make it difficult for the poor to afford food from consumer cooperatives.	11.1/80.5	8.1/0.2	5.2
I find the quality of products provided by consumer cooperatives to be poor.	46.3/36.5	15.2/2.0	3.8
Buying food from consumer cooperatives takes too much time for me.	51.6/33.7	14.3/0.5	3.4

[a] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[b] N is 'Neutral', DK is 'Don't know'.
[c] Scores were derived from a 7-point scale, with 1 indicating 'strongly disagree' and 7 indicating 'strongly agree'

As of 2011, over half of million consumers had joined the four largest and several smaller consumer cooperatives. This rapid growth in part resulted in uncertainty between demand and supply. Some member farmers were troubled by the 'limits on quantity and items of products' that farmers are contracted to sell (Table 6.15).

> *"As there is a limit for product quantities in the contract with consumer cooperatives, I cannot avoid selling any of my organic farm surpluses to the large distribution markets. It means that I sell my products at a loss because organic farming is expensive."*
>
> *(Member farmer: Hansalim #18)*

Member farmers identified difficulties with the quality standards of consumer cooperatives and sought a greater ability to sell lower-quality products. Further, some indicated that the high production costs also represented a risk and others indicated that the limited sales of products created additional financial difficulties, and that too many of the profits were still going to the (consumer cooperative) distributor.

> *"Due to small amounts of products and the high distribution costs, the profit still goes to distribution retailers rather than consumers and farmers."*
> *(Member farmer: Dure #29)*

Others felt that there were risks associated with the still low prices and their limited access to on-farm labour (Table 6.15).

Table 6.15: Risks of consumer cooperatives for farmers

Risks	Frequency
Limits on quantity of products	7
Trouble with selling lower-quality products	5
High production costs	5
Trouble with finances due to the small amount of products all the year round	4
Low prices for products	3
Labour shortages	3

6.3.5. Barriers to the potential of consumer cooperatives

Although most member consumers and farmers were optimistic about the potential for and future of consumer cooperatives, there were still some substantial barriers to their future growth and evolution. Many stakeholders were concerned about

the negative implications of excessive competition among the consumer cooperatives, especially as related to their underlying principles.

> *"Excessive competition among consumer cooperatives is the barrier. Some consumer cooperatives adopt industrial enterprise systems and extend their business. I think it has damaged the principles of these consumer cooperatives."*
>
> *(Jae- Sook Choi: Eco Coopreative)*

Consumer cooperatives have grown remarkably in Korea since the 2008 rallies that took place against the imports of US beef, as consumers became aware of food safety issues and joined consumer cooperatives as a way of addressing their concerns. Over this time period, each consumer cooperative has opened stores in metropolitan areas, and competition among consumer cooperatives has intensified. As competition and conflict among consumer cooperatives has increased, some identified that these conflicts were caused by the adoption of industrial capitalistic behavior and anticipated that any negative impacts would ultimately be borne by small-scale farms and rural communities.

> *"Consumer cooperatives tend to adopt the philosophy and business style of industry and capitalism. Consequently, their capital power is able to control consumers and farmers. For instance, consumer cooperatives have centralized their distribution system and hindered local food systems. Therefore, I am worried about the decline of small family farm."*
>
> *(Bin-Pa Lee: Seongbuk School Lunch Centre)*

Stakeholders recommended that leaders in the cooperatives movement remind and ground themselves in the cooperatives principles that gave rise to these organizations. Meanwhile, others spoke about efforts to organize a national alliance of consumer

cooperatives, which would help facilitate communication and mutually supportive activities among the cooperatives. In doing so, the coordinated competitiveness and growth of these cooperatives would benefit the movement as a whole.

> *"The competition among consumer cooperatives is not the barrier to their improvement. They need to respect each other with competition. Currently, there are many discourses of alliance among consumer cooperatives."*
>
> *(Gee- Seop Kim: Dure)*

Many stakeholders were highly critical about a law on consumer cooperatives that was introduced in 2013, which acts to restrain their potential. The law stipulated that consumer cooperatives should deal with environment-friendly agricultural products only. They recommended amending the law so that consumer cooperatives could also distribute environment-friendly industrial products including household cleaners, clothing, and solar appliances.

> *"There is a need to amend the law that restricts consumer cooperatives to deal with agricultural products only."*
>
> *(Yeol Choi: Korea Green Foundation)*

One expert mentioned that consumer cooperatives needed to better practice democratic decision-making and further reflected that these practices were undermined by the traditional paternalistic and sexist Confucian culture that still influences Korean society as a whole.

> *"We need to learn and practice the principles of cooperatives. Due to traditional patriarchy, consumer cooperatives in Korea lack rational and*

democratic decision making processes. The members are often frustrated by the contradictory intent of cooperation and paternalism."

(Won-Gak Jung: iCoop)

Activists also suggested that urban life styles, individualism, and changing values in society amounted to huge barriers to the future large-scale development of consumer cooperatives.

"One barrier of consumer cooperatives is the busy life style of women. They are too busy to be interested in foods. As well, young generations in South Korea are only concerned about entering university and getting jobs. People have changed food consumption patterns such as eating out and group feeding. The business style of consumer cooperatives does not reflect those trends. In the past, food issues giving rise to social movement related to politics. Yet, since democracy has been achieved, social movements are now dealing with issues related to daily life. However, there is still a question of how many members of consumer cooperatives will join social movements related in political issues because I found some consumers are only interested in their food and the health of their families."

(Mi-Hyeok Gwon: Korean Womenlink)

Meanwhile, one stakeholder who works in a farmer organization indicated that while consumer cooperatives clearly had many benefits, they were also had some negative implications for rural regions. She was worried that consumer cooperatives had separated organic and conventional farmers and had further peripheralized the latter group.

"Although there are many positive implications of cooperatives, now I want to talk about negative things. As consumer cooperatives only deal with

organic products, farmers are divided and conventional farmers are marginalized."

(Kyung-san Hwang Kim: Korean Women Peasant Association)

Moreover, she was concerned that the cooperatives gave consumers too much control over the farm practices and livelihoods of member farmers.

"Consumer cooperatives follow consumer requests rather than considering farmers and agriculture. As a matter of fact, consumer cooperatives separate conventional farmers far from consumers."

(Kyung-san Hwang Kim: Korean Women Peasant Association)

6.3.6. Prospects for consumer cooperatives

Despite these barriers and limitations, most participants were optimistic about the prospects of Korean consumer cooperatives; indeed, 96.2% of member consumers and 90.1% of member farmers felt positive about the future of these organizations. Additionally, they saw the consumer cooperatives movement as representing a solution for addressing rural crises in Korea as one of the most important alternatives to the global agri-food systems (Table 6.16). Further, 92.7% of member consumers were actively encouraging family and friends to join consumer cooperatives/

Table 6.16: Consumer cooperatives and alternative food system

Question	Combined (%)		Member consumers (%)		Member Farmers (%)	
	-/+[a]	N/DK[b]	-/+[a]	N/DK[b]	-/+[a]	N/DK[b]
I feel positive about the future of Consumer cooperatives.	2.5/93.2	4.0/0.5	0.9/96.2	2.0/0.9	4.0/90.1	5.9/0
Consumer cooperatives movement is a solution to the Korean rural crisis.	0.9/92.3	5.6/1.7	0.9/92.1	4.5/2.5	0.9/92.5	6.7/0.9
Consumer cooperatives are an important alternative to the global agri-food system.	1.9/90.3	6.2/1.7	0.9/91.0	4.8/3.4	2.8/89.6	7.6/0

[a] Responses ranging from 1-3 were indicated as negative (-) and those ranging from 5-7 as positive (+).
[b] N is 'Neutral', DK is 'Don't know'.

Many stakeholders in this study also agreed that consumer cooperatives represented an important alternative to the global agri-food system. However, their visions and positions differed. One iCoop leader mentioned that the ultimate goal of consumer cooperatives movement was social change.

> *"The goal of consumer cooperatives is social change and we are not interested in supplementing capitalism. We want to change the production system through the cooperatives movement. That is a kind of pre-socialism."*
>
> *(Won-Gak Jung: iCoop)*

Although the Hansalim representative agreed that consumer cooperatives had a role to play in social movements, their goal was to build alternatives within the current market system. In the process, consumer cooperatives would contribute to societal progress.

> *"Consumer cooperatives propose a successful initiative or show the direction for some alternatives. They do not intend to change society completely, but they provide chances to launch alternatives within the current market system.*

For instance, Hong sung Hansalim played a lead role in enacting school lunch program regulation. They are supplying organic rice to school at a discounted price. Like that, consumer cooperatives played a supportive role in launching the school lunch program. Alternatives cannot be realized without practical action. Consumer cooperatives play certain and partial roles in social progress. But food issues cannot represent all social issues. To achieve social progress, every part of many movements, i.e. education, medical care, community action, has to be mobilized."

(Geun-Haeng Lee: Hansalim)

Although the ideology that give rise to and the strategies that are developed by the consumer cooperatives movement remain somewhat confused, some stakeholders argued that consumer cooperatives represent one of the most practical movements and that these movements have certainly been successful in Korea. Thus, they expect the roles that consumer cooperatives play in building alternatives and mitigating negative effects of global agri-food system to grow in the future.

"In the past, many social movements often claimed slogans without practices. As consumer cooperative movements intended to connect the economy with people's everyday lives, the impact of their business on society is very strong. If consumer cooperatives develop new distribution systems that help consumers and farmers bond together, alternative distribution systems that eliminate multinational industries, then mass production and mass consumption will be established."

(Eun-Mee Jeong: KREI)

An activist working in a feminist movement insisted that consumer cooperatives should support and advocate for women' rights and empowerment. She advised that

organizing consumers and educating them about the democratic principles of consumer cooperatives are important strategies in addressing negative influences of the global agri-food system and establishing alternative food systems in Korea but this as part of a larger and inherently political anti-globalization movement.

> *"Consumer cooperatives stimulated food safety movements and encouraged organic farming. They contributed to the empowerment of women and provided women with opportunities to access and deal with larger social issues. They have organized people and educated them about the principles of cooperatives. I expect that consumer cooperatives will play an important role of anti-globalism and alternative movements. First, consumer cooperatives have to carry out the task to win in a competition with global food companies. Second, consumer cooperatives have to solve foods issues independently based on democratic movements."*
>
> *(Mi-Hyeok Gwon: Korean Womenlink)*

6.4. Discussion

Many scholars have been interested in the conceptual complexities and practice theories as related to food and consumer movements (Desmarais & Wittman, 2014; Little et al., 2010). Some studies emphasize that the growing number of citizen-consumers acts on value-oriented decision- making and prioritize the goals of larger society (Hauser et al., 2011; Lehner, 2013; Tobler et al., 2011). They elucidate that ethical and responsible consumer behaviors are able to alter the global agri-food system that now threatens food safety, environment, and marginalized small-scale farmers around the world (Alkon & Norgaard, 2009; Kim, 2007; Ropke, 2009).). Yet, others argue that ethical consumer

behaviors are simple reflection of individual preference and thus limited in any larger socio-political impacts (Birchall, 2004). In addition, any alternatives are often made fragile by industrial and neo-liberal market strategies that advocate economic growth at the expense of all else (Lehner, 2013).

In this study, only 27.5% of member consumers indicated their ethical commitment to social sustainability and equity (i.e. protection of environment, rural communities, and direct markets) were one of their motivations for becoming members of consumer cooperatives (Table 6.5). The rest were more likely to see consumer cooperatives as places to access safe foods, and were only too willing to pay high food prices to help ensure their family health. Yet, some experts argue that the future of alternative food systems is influenced by the continued interaction among members within organizations rather than individual awareness of the members themselves (Izumi et al., 2010; Lehner, 2013). Accordingly, continued education and interaction among members is necessary for the sustainability of consumer cooperatives. Indeed, iCoop consumer cooperatives reported that the number of members participating in education programs increased 132%, in one year, from 32,756 members in 2011 to 76,102 in 2012, this in turn accounting for 58.6% of the total membership (iCoop, 2014). The growth in member awareness surrounding farmer concerns and rural issues as well as the larger importance of consumer cooperatives in supporting the development of alternative food systems that arises from these education initiatives speaks to the great promise of these cooperatives.

Alternative food systems refer to the many diverse and innovative practices for sustainable food systems that reflect equitable relationships of participants as they work towards the production, distribution, and consumption of foods (Lehner, 2013). In this respect, Korean consumer cooperative practices can readily be regarded as a highly successful alternative to the global agri-food system. Their success was attributed to committed consumers and the equitable management systems of these cooperatives. Indeed, this study showed that the great majority (85.9%) of member farmers agreed with the statement that selling products to consumer cooperatives is more profitable than selling to large retailers. According to Choi et al. (2013), the distribution margin of consumer cooperatives in 2012 represented 23.9% of food prices, whereas the margins of large retailers and wholesale markets were 39.8% and 48.6% of food prices, respectively. Accordingly, the profit of organic farmers selling their products to consumer cooperatives was the highest, at 63.8% of foods prices, followed by 50.1% for large retailer and 42.8% for wholesale markets (Choi et al., 2013). The price premiums earned by most (27.8 %) member farmers in this study were 11-20%, some (20.6 %) earned premiums of 21-30%, and a few (10.3%) even earned premiums of 31-50%. Thus, consumer cooperatives supply safe foods for consumers at relatively affordable prices and assure higher profits for farmers. Consumer cooperatives usually make cultivation contracts with farmers to mitigate price volatility and any uncertainties surrounding the farm economy. They also launched a ‘stabilizing fund for food prices’, which uses a certain portion of the consumer membership fee to stabilize food prices for member farmers (Hansalim, 2015; iCoop, 2014). Additionally, one of the largest consumer

cooperatives in Korea, iCoop, newly adopted the 'pre-purchase of domestic grains fund' to help reduce farmer debt occurred in the planting period (iCoop, 2014). Member consumers purchase specific grains and pay for these in advance. These two funds helped stabilize product prices and reduce risk to member farmers. The business model of these consumer cooperatives demonstrates that there are practical and effective solutions for coping with rural concerns and the ongoing agricultural crisis in Korea (e.g. Thompson et al., 2014).

Yet, these cooperatives also have some limitations. One of the major criticisms was that Korean consumer cooperatives represent an opportunity for the rich as those living in poverty are unable to afford the higher prices of organic products. That such initiatives arguably result in a two-tier food system is of course a charge that is levied at many such alternatives to the global agri-food system (e.g. Allen & Guthman, 2006). Yet, consumer cooperatives are implementing a number of diverse efforts to address these criticisms. The iCoop consumer cooperatives announced that their first mission is to supply safe foods that ordinary people can afford. They proposed reforming their distribution structure and called for efforts of both farmers and governments to reduce production costs. Indeed, without government policies that would effectively provide support for organic farmers lower organic food production costs and prices become unlikely.

In the interim, consumer cooperative movements have concentrated on education programs that can help shape individual consumer behavior. The ultimate success of consumer cooperatives depends on increased consumer awareness of social justice and

the role of consumer movements in seeking and generating viable alternatives to international food chains. Yet, a preoccupation with business priorities also encourages consumer cooperatives to focus on the reform of domestic food distribution systems and consumer awareness, but pays much less attention to the neo-liberalization of food systems, especially when working for the larger social good. In this respect, they will proactively support anti-nuclear movements for food safety but show a relatively passive attitude towards anti-WTO movements lead by small-scale farmers in Korea and beyond. Thus, some stakeholder participants in this study and traditional peasant movements (e.g. Korean Peasant League, Korean Women Peasant Association) have criticized consumer cooperatives for alienating conventional farmers and for concealing agricultural inequality within a larger colonial context of globalization.

Another weakness of these Korean consumer cooperatives is the difficulties they encounter in increasing their membership numbers, in part due to their distinctive focus on the provisioning of organic foods. The mission results in a limited market share, accounting for around 2% of all total agriculture in Korea in 2010 (Statistics Korea, 2014). This market share is ostensibly limited by the high prices of organic foods. Although consumer cooperatives established diverse policies to lower product prices, it seemed that their high food prices are the most critical barrier to their future growth. Although consumer cooperatives insisted that they tried to grant high profit margins for organic farmers, farmers were often also dissatisfied with the prices they received (also see Choi et al., 2013). Moreover, many stakeholders in this study also referred to the competition and conflict that currently occurs among consumer cooperatives in Korea. In

this respect, Korean consumer cooperatives are arguably at risk of adhering to capitalistic behavior and departing from their democratic cooperative principles as some consumer and direct marketing cooperatives had also experienced in the EU and North America (Birchall, 2000; Bōōk & Ilmonen, 1989).

Regardless, the outcomes of this study show that consumer cooperatives represent one of the most successful approaches to alternative food systems in Korea, or for that matter anywhere in the world. They, at once, address food safety concerns on the part of member consumers and the livelihood and rural concerns on the part of member farmers while supporting domestic food systems and working towards food self-sufficiency across the country. These efforts have already strongly influenced agricultural and food policies of provincial governments in Korea. Currently, most provinces have adopted the business strategies of consumer cooperatives as they relate to free school lunch programs as provisioned by environment-friendly school lunch centers that collectively purchase domestic and organic foods from farms. Korean consumer cooperatives demonstrate the success of marketing strategies that organize consumer demands and that directly connect consumers with small-scale farmers.

In part because of the successes, Korean food activists and practitioners are now discussing ways of expanding these local and sustainable food provisioning systems to link with other parts of the public sector, i.e. kindergartens, daycares, hospitals, nursing homes, community kitchens, and the army. By using such contract cultivation systems and advance payment practices in generating safe and sustainable foods at fair prices for

all members, there is little doubt that these consumer cooperatives and alternative food systems as a whole will continue to grow and expand in Korea.

6.5. Conclusions

This chapter explored the roles of Korean consumer cooperatives in addressing agricultural decline and food concerns in Korea. In addition, I examined the degree to which consumer cooperative practices can lead to build alternatives to the global agri-food system in Korea. The results showed that Korean consumer cooperatives provide many benefits to both member consumers and farmers. They also help create sustainable and equitable relationships between consumers and organic farmers. These relationships were further facilitated by the recent launching of 'contract cultivation' systems and 'pre-purchase of domestic grains funds' to support farmer livelihoods. The emerging food practices in Korea such as provincial free school lunch programs benchmarked the management strategies of consumer cooperatives. In this regard, Korean consumer cooperative practices can be rightly regarded as one of the most successful alternatives to the global agri-food system.

Korean consumer cooperatives need to resolve several obstacles in order to develop further. They should explore ways of providing safe and nutritious foods to those living in poverty. Member consumers in this study showed their willingness to pay extra premiums for these vulnerable groups. In addition, it is essential that these organizations continue to follow the principles of cooperatives, especially as it relates to cooperation among cooperatives. Excessive competition among consumer cooperatives is

observed and growing. Finally, consumer cooperatives need to find ways of reaching out to and supporting conventional farmers and their organizations. All small-scale farmers regardless of their worldviews and values are necessary for the protection of agriculture and rural communities in Korea.

References

Akenji, L. (2014). Consumer scapegoatism and limits to green consumerism. *Journal of Cleaner Production*, 63(1), 13-23.

Alkon, A. & Norgaard, K. (2009). Breaking the food chains: An investigation of food justice activism. *Sociological Inquiry*, 79(3), 289-305.

Allen, P. & Guthman, J. (2006). From "old school" to "farm-to-school": Neoliberalization from the ground up. *Agriculture and Human Value*, 23(4), 401-415.

Basok, T., Ilcan, S. & Noonan, J. (2006). Citizenship, human rights, and social justice. *Citizenship Studies*, 10(3), 267-273.

Bergeaud-Blackler, F. & Ferretti, M. (2006). More politics, stronger consumers? A new division of responsibility for food in the European Union. *Appetite*, 47(2), 134-142.

Birchall, J. (2004). *Cooperatives and the Millennium Development Goals*. Geneva: ILO & COPAC.

Birchall, J. (2000). Some theoretical and practical implications of the attempted takeover of a consumer co-operative society. *Annals of Public and Cooperative Economics*, 71(1), 29-54.

Bōōk, S. A. & Ilmonen, K. (1989). Problems of contemporary cooperatives: Consumer cooperatives in Sweden and Finland 1960-80. *Economic and Industrial Democracy,* 10 (1989), 499-515.

Brook, R. & McLachlan, S. (2006). Factors influencing farmers' concerns regarding bovine tuberculosis in wildlife and livestock around Riding Mountain National Park. *Journal of Environment Management*, 80(2), 156-166.

Burnham, K. & Anderson, D. (2002). *Model selection and multimodel inference: A practical information-theoretic approach* (2nd Edition). New York: Springer.

Choi, B., Kim, B. & Lee, G. (2013). *Activation measures of distribution for environment friendly agricultural products in wholesale market.* Seoul: Korea Rural Economic Institute. [In Korean]

Desmarais, A. A. & Wittman, H. (2014). Farmers, foodies and First Nations: Getting to food sovereignty in Canada. *The Journal of Peasant Studies*, 41(6), 1153-1173.

Hansalim. (2015). *2014 Hansalim Annual Report*. Retrieved from http://www.hansalim.or.kr/?page_id=21031. [In Korean]

Hansalim Mosim & Salim Institute. (2012). Detection of radioactivity in shiitake mushroom: Make an opportunities of intensifying and extending for Hansalim movements.. *The eye of Mosim, the way of Salim*, 2, 1-6. [In Korean]

Hauser, M., Joans, K. & Riemann, R. (2011). Measuring salient food attitudes and food-related values. An elaborated, conflicting and interdependent system. *Appetite,* 57(2), 329-338.

Hatcher, L. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling (3rd ed.)*. Cary, NC : SAS Institute Inc.

Hong, S. (2008). Complete import of the US beef and development of life politics. *The radical Review*, 36, 181-185.

Hur, J. & Pack, C. (2012). Do free trade agreements increase economic growth of the member countries? *World Development*, 40(7), 1283-1294.

iCoop. (2014). *2013 iCoop Korea Annual Report*. Retrieved from http://lemonhee.cafe24.com/2013_Eng.pdf [In Korean]

International Cooperative Alliance. (2014). Co-operative identity, values & principles. Retrieved from http://ica.coop/en/whats-co-op/co-operative-identity-values-principles.

International Cooperative Alliance. (2013). Co-operative facts & figures. Retrieved from http://ica.coop/en/whats-co-op/co-operative-facts-figures.

Izumi, B., Wright, W., & Hamm, M. (2010). Farm to school programs: Exploring the role of regionally-based food distributors in alternative agrifood networks. *Agriculture and Human Values*, 27(3), 335-350.

Jang, J. (2014). The recent evolution of cooperative sector. *Korean Cooperatives Studies,* 32(1), 1-25. [In Korean]

Jang, J. (2012). The attributes of production and transaction of environmentally-friendly agro-food products and development of Korean consumer cooperatives. *Korean Cooperatives Studies,* 30(2), 23-41. [In Korean]

Jeong, H. & Moon, D. (2013). *Response strategy to the abolishment of low-pesticide agricultural product certification*. Seoul: Korea Rural Economic Institute. [In Korean]

Jeong, G. (2013). Strengthening the risk communication of food safety. *Health and Welfare Policy Forum,* 196(2013, 2), 93-87.

Kang, S. (2013). Irrationality and regulation: Constructing mad cow knowledge in the US-South Korea FTA. *Globalizations*, 10(4), 587-601.

Kato, Y. (2013). Not just the price of food: Challenges of an urban agriculture organization in engaging local residents. *Sociological Inquiry*, 83(3), 369-391.

Kim, C., Jeong, H. & Moon, D. (2013). *Production and market of environmental-friendly agricultural products in domestic and foreign countries*. Seoul: KREI Agricultural Policies Focus, 55. [In Korean]

Kim, J. (2007). A study on the consumers' role in the local food system. *Korean Journal of Community Living Science,* 18(4), 617-627. [In Korean]

Kim, J., Kim, S. & Jeong, W. (2007). *Perception of the members of Consumer cooperatives*. Seoul: ICOOP Consumers' Cooperative Institute. [In Korean]

Korea JoongAng Daily. (2014). Detection radioactivity in 6.7% of see food. Retrieved from http://article.joins.com/news/article/article.asp?total_id=16584985&cloc=olink|article|default [In Korean]

Lamine, C. (2005). Settling shared uncertainties: Local partnerships between farmers and consumers. *Sociologia Ruralis*, 45(4), 324-345.

Lee, S., Kim, S. & Wainwright, J. (2010). Mad cow militancy: Neoliberal hegemony and social resistance in South Korea. *Political Geography*, 29(7), 359-369.

Lee, H. (2014). *Impact of FTA on agriculture in Korea*. Seoul: Agriculture and Farmer Policy Institute. [In Korean]

Lehner, M. (2013). Alternative food system and the citizen-consumer. *Journal of Agriculture, Food system, and Community Development*, 3(4), 49-53.

Little, R., Maye, D., & Ilbery, B. (2010). Collective purchase: Moving local and organic foods beyond the niche market. *Environment and Planning A*, 42(8), 1797-1813.

Micheletti, M. & Stolle, D. (2007). Mobilizing consumers to take responsibility for global social justice. *Annals of the American Academy of Political and Social Science,* 611(1), 157-175.

Moon, H., Jeong, H., Kim, S., & Kim, Y. (2014). *Evaluation of agricultural implementation for 10 years of Korea-Chile. FTA*. Seoul: KREI. [In Korean]

Oczkowski, E., Krivokapic-Skoko, B., & Plummer, K. (2013). The meaning, importance and practice of the co-operative principles: Qualitative evidence from the Australian co-operative sector. *Journal of Co-operaive Organization and Management* 1(2), 54-63.

Porkka, M., Kummu, M., Siebert, S., & Varis, O. (2013). From food insufficiency towards trade dependency: A historical analysis of global food availability. *PLoS ONE, 8(12)*, 1-12.

Rainbolt, G., Onozaka, Y. & McFadden, D. (2012). Consumer motivations and buying behavior: The case of the local food system movement. *Journal of Food Products Marketing*, 18(5), 385-396.

Rayner, A. J. & Ennew, C. T. (1987). Agricultural co-operation in the UK: A historical review. *Agricultural Administration and Extension*, 27(2), 93-108.

Røpke, I. (2009). Theories of practice-New inspiration for ecological economic studies on consumption. *Ecological Economics*, 68(10), 2490-2497.

Statistcs Korea (2014). *Production of environmental-friendly agriculture*. Retrieved from http://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx_cd=1292.

Thompson, S., Rony, M., Temmer, J. & Wood, D. (2014). Pulling in the indigenous Fishery cooperative net: Fishing for sustainable livelihoods and food security in Garden Hill First Nation, Manitoba, Canada. *Journal of Agriculture, Food Systems, and Community Development,* 4(3), 177-192.

Tobler, C., Visschers, V., & Siegrist, M. (2011). Eating green consumers' willingness to adopt ecological food consumption behaviors. *Appetite,* 57(3), 674-682.

Thompson, S. & Cowan, T. (2000). Globalizing agro-food systems in Asia: Introduction. *World Development*, 28(3), 401-407.

United Nations. 2012-Intrnational Year of Cooperatives. Retrieved from www.un.org/en/events/coopsyear/

Vermeir, I. & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude-behavioral intention" gap. *Journal of Agricultural and Environmental Ethics,* 19(2), 169-194.

CHAPTER 7

THESIS DISCUSSION AND CONCLUSIONS

7.1. Introduction

My goal in this thesis was to explore South Korean (herein Korea) consumer and farmer attitudes to an ongoing rural crisis, their concerns about a globally integrated food system, and the roles and reliability of consumer cooperatives as one of the most important contributors to alternative food systems in Korea. This research analyzes attitudes of both consumers and farmers to various agricultural and rural threats that arise from this globally integrated food system. This study compared differences in attitudes and behaviours of conventional consumers and consumers that are members of consumer cooperatives (herein member consumer) as well as between conventional farmers and farmers that have joined consumer cooperatives (herein member farmers). In addition, the research explored the roles that several Korean agri-food movements are playing in building alternative food systems and in providing social support for activists resisting a global agri-food system dominated by international agricultural corporations. Finally, the study critically examined the degree to which agri-food movements based on widespread public perceptions of food safety and food sovereignty are able to challenge the neo-liberal agenda in Korea (Kim, 2010; Lee et al., 2010). The research is the first of its kind in Korea and one of few such studies conducted in Asia.

Since the WTO has influenced economies and trade systems around the world, Korean agriculture and food production have become subject to international trade regulations. Reflecting WTO negotiations and trade policies, Korea has removed trade barriers and opened agriculture and food markets to international food imports over the last 20 years.

Korea is one of the world's lead countries in its aggressive adoption and promotion of neo-liberal policies on economy and its concomitant sacrifice of national food self-sufficiency. These policies have driven industry-led economic growth based on abundant labour power with low wages. In the process, arable land has been converted into industrial uses and an outward migration from rural communities to major urban centres has occurred, where these often young migrants become poorly paid industrial workers. Korean government established a low food-price policy for low-income workers and, in turn, domestic agriculture was sacrificed for industrial development.

In achieving this rapid economic growth, the majority of Koreans have experienced instability of employment and a decline in household income (Kim, 2015). In addition to those social changes, agricultural speculation by international hedge funds have caused serious shortages in food supply and food safety concerns in Korea and elsewhere in the world (Headey, 2011). Without considering public concerns about food safety and food self-sufficiency, the Korean government has established agricultural policies based on the conversion of small-scale family farms to large-scale farms and farming mechanization (Back et al., 2011). However, those agricultural policies have failed despite substantial governmental support due to the small land area and high land costs in Korea (Lee, 2012). Subsequently, Korean agriculture and rural communities have entered a decline, unable to compete with developed agricultural countries and international large agri-food corporations.

Although Korea has decided to support industry-led economic growth, a chronic food crisis has emerged as characterized by shortages in food supply and by price

volatility, which have in turn strongly influenced public perceptions of domestic agriculture and rural communities. Under these circumstances, Koreans have become aware of and greatly concerned about declines in food safety that are a symptom of the global agri-food system, which has in turn become one of the major mobilization resources of social movements and political conflicts in the country. In terms of agriculture and food policies, the Korean public shows a deep distrust of the government. They represent that the government needs to establish policies that provide strong protection for domestic agriculture and farmers, even though protecting and supporting domestic agriculture may conflict with WTO regulations.

Countries around the world have similarly been confronted by threats to food security, food safety, and food price stability (Hojjat, 2009). Resisting agricultural liberalization, agri-food movements and practices informed by principles grounded in food sovereignty and food democracy have emerged around the globe.

The Korean public has demanded alternatives to the global agri-food system as a series of protests that have focused on US beef imports and radioactive contaminated foods. Local governments are beginning to build alternative food systems and local direct markets to help address these public concerns around food safety. Korean consumer cooperatives are growing exponentially in order to address this increased public demand. Further, a local referendum held in Seoul in 2011 about the adoption of an environment friendly free school lunch program triggered citizen-consumer food movements based on food sovereignty ideology around the country.

It seems that the global community has been experiencing a paradigm shift in terms of economic development and agricultural policies. In the past, agro-economists were persistent that opening markets and free trade systems would enhance trade equality and resolve global hunger. Yet, millions of people around the world currently seek and practice alternative food systems that help achieve real social justice and food sovereignty.

7.2. Major research outcomes

Agricultural globalization and food safety concern (Chapter 3)

The Korean government and public followed the advice of international financial institutions, which abandoned food self-sufficiency policies while pursuing industrial economic growth. Koreans initially benefitted from abundant low-cost foods produced by agricultural globalization. However, in becoming excessively dependent upon the global agri-food system for their foods, Koreans have experienced threats to food safety, a high volatility of food prices, and the widespread shortage of food supply. Meanwhile, in this study, consumers indicated that freshness was the most important food factor when they purchase foods, followed by safety and price. It seems unlikely that the global agri-food system will satisfy those consumer requirements. The rallies surrounding the import of potentially BSE-infected beef from the US was an expression of public resistance to agricultural globalization and the way the Korean government had pursued economic liberalization while abandoning their duty to protect public health and welfare.

Since these rallies have subsided, food issues have become an important mobilizing resource for political and social movements in Korea.

Support for raising food self-sufficiency and local food systems (Chapter 4)

This study identified that Koreans are demanding that their government establish food self-sufficiency as a policy goal and that they further support domestic agriculture and rural communities in Korea. Those concerns reflect an understanding that food is a universal human right. Participants perceive that Korean government policies abandoning domestic agriculture was the primary cause of low rate of food self-sufficiency in the country. Accordingly, Korean consumers and farmers want policies to be introduced that will promote food self-sufficiency. Further, these policies should vitalize direct marketing and also support small-scale farmers.

Many differences in how the term 'local' was defined by Koreans emerged in this study. Regarding geographical definitions, many consumers perceived local to refer to the restricted area that surrounds their communities. In contrast, stakeholders in this study and alternative food practitioners indicated that whole nation should be considered as local. Besides, for small countries, they insisted that distribution systems and the relationships between consumers and farmers are more important when discussing local than geographical distance.

Farmer perceptions of rural concern (Chapter 5)

This study documented farmer perceptions of rural decline and agriculture. Korean farmers were more generally critical of the global agri-food system. While they have a little opportunity to access global markets, they have been significantly affected by the unstable prices of imported foods. The study further documented differences in attitudes towards agricultural policies and foods between conventional and member farmers. Both conventional and member farmers were strongly opposed to the sacrifice of domestic farming that occurred while achieving economic growth in Korea. Thus, they, and especially conventional farmers, were pessimistic about the future of Korean agriculture. Outcomes indicated that financial status was the most important factor that shape farmer attitudes, followed by education, age, and food expenditure. Farmer attitudes towards government policies were much more critical among farmers of low financial status was low, for both conventional and member farmers. In addition, university-educated farmers were also generally the most critical of these government policies.

Yet these results also showed that farmers had a strong desire to create alternative food systems in Korea. Most Korean farmers agreed that a key approach to achieving these ends was to shorten the distance from farm to fork and to adopt and promote direct marketing systems.

Alternative food systems and the future of agriculture in Korea (Chapter 6)

Korean consumer cooperatives were founded by consumers and farmers seeking to build food systems that could provide safe and healthy foods at fair prices. From the beginning, member consumers and farmers have tended to practice food justice and ethical consumption and production. Thus, Korean consumer cooperatives deserve recognition as one of the great success stories when it comes to building effective alternatives to the globally integrated industrial food system. Outcomes revealed that consumer cooperatives provided many and various benefits for farmers. They were able to enter contracts with consumer cooperatives that guaranteed markets with substantial price premiums. Thus member farmers earned 11-50% premiums compared to prices paid by large retail markets. Member consumers also recognized that consumer cooperatives more fairly compensated farmers and supported small family farms. It was recognized by member consumer and farmers alike that these cooperatives facilitate two-way communication and learning between these two groups, which helps share and anticipate concerns and expectations. Thus, member consumers were encouraged to learn about rural concerns through the diverse education programing provided by consumer cooperatives. Consumer cooperatives thus showed a highly effective frame for building alternative agri-food systems through cooperation between consumers and farmers. It was thus suggested that organizing consumer demands and collaboration between consumers and farmers represent meaningful ways of addressing the many negative influences of the global agri-food system in Korea and beyond.

7.3. Implications of these thesis outcomes for existing concepts surrounding alternative food systems

Since the Korean government adopted industrial and economic growth as a priority in the early 1970s, domestic agriculture and rural communities have continued to decline and the rate of food self-sufficiency has plummeted across the country. This research project examined the roles that large consumer cooperatives play into addressing the Korean rural crisis and examined how and to what degree these cooperatives work compare to other alternative food systems in rest of the world.

A diversity of relevant conceptual approaches to food systems, food production, and food consumption exists (Feenstra, 2002; Holt-Giménez & Shattuck, 2011). Some (e.g. food security and alternative food network) primarily focus on consumer-centered alternative food systems (Desmarais & Wittman, 2014; Holt-Giménez, 2009: Lehner, 2013; Si et al., 2015). Meanwhile, other conceptual approached including food democracy, food citizenship, food justice and food sovereignty ground such alternative food systems within a larger contest of social change and justice (Alkon & Norgaard, 2009; Willkins, 2005). Some of these concepts are closely related (e.g.food democracy and food citizenship), and all are predicted on active 'participation' at local and regional scales. .

These food concepts were characterized across the four dimensions that are typically used to characterize sustainability, i.e. the economic, environmental, social, and political (Table 7.1). Access, affordability, stability, and trade all were seen as

representing major elements of the economic dimension. In turn, environmental protection, organic farming, safe and healthy food, and small-scale farms were all viewed as elements of the environmental dimension. The social dimension was seen as consisting of community, participation, and self-sufficiency, and final political dimension was seen as consisting of equity, justice, and social change (Table 7.1). Relationships between the outcomes of this research were compared to these other literature-based conceptual approaches along these four dimensions.

It was found that 'food safety' or 'healthy food' represented elements of all these food-related concepts, although less important in more politicized approaches. 'Equity' and 'justice' were also an important part of all concepts except 'food security'. 'Food sovereignty' was found to be the most comprehensive concept as it encompasses all components except 'affordability', in part because it is largely grounded in food production. Meanwhile, 'food security' was seen as focusing mostly on the economic dimension (Agarwal, 2014) whereas 'food citizenship' and 'food democracy' focused mostly on the social dimension.

I then compared the outcomes of this research on Korean consumer cooperatives to these food related conceptual approaches (Table 7.1). My outcomes showed that the Korean consumer cooperative movement also encompassed the economic, environmental, social, and political dimensions. Regarding the economic, the cooperatives shortened the distribution chain between production and consumption, allowing farmers to benefit from price premiums. Cooperatives also launched 'contract farming' and the 'pre purchase of domestic grain fund' to enhance economic benefits to member farmers. In turn, with

respect to the environment dimension, Korean consumer cooperatives supported small-scale organic farming and by reducing reliance on chemical inputs and GMOs acted to protect the environment and food safety. Furthermore, the cooperatives promoted recycling and solar energy generation and highlighted the importance of nuclear power and climate change to members. With respect to social dimension, the cooperatives represented an important community support for both member consumers and farmers and provided various educational programs regarding the importance of rural communities and locally produced food. With respect to the political dimension, many members actively organized and campaigned regarding social and political issues including a national lunch program for daycares and protested against nuclear power and the imports of US beef (Table 7.1).

This research also demonstrated both differences and similarities between Korean consumer cooperatives and AFN in the west. First of all, consumer motivations for engaging in such initiatives differed substantially between two alternative food movements. The primary motivations for Korean member consumers were concerns regarding food safety and personal and family health, which was also reflected by AFN in China but also North America and Europe. This, in turn, reflects the importance of health and access to foods in many urban consumer households around the world. Importantly, for many member consumers in this study, environment, ethical consumption, and the decline of local food systems and rural communities also acted as strong motivations for participating in the cooperatives.

Both Korean consumer cooperatives and farmer-based AFN in west (e.g. farmers market and local distribution system) reflect the needs of and provide substantial benefits to farmers, reflecting the central role that farmers usually play in shaping these initiatives. In this study, these benefits included price premium, contract farming, shortened distribution chains and direct markets, and meaningful connections and relationships with consumers. Unlike most farmer-driven initiatives in North America, the Korean consumer cooperatives achieved these farmer-centered outcomes while still managing to reflect the needs and priorities of their urban member consumers. In so doing, both consumers and farmers were able to share benefits and risks, a combined end that was rarely seen elsewhere in the literature, especially as they relate to consumer-driven food initiatives.

Most of the alternative food systems data documenting the implications of these initiatives for farmers is qualitative in nature. However, I was also able to quantify some of the benefits that Korean consumer cooperatives provided to member farmers compared to other distribution systems (e.g. price premiums of 10-30%), which arguably will be more readily accepted by decision-makers.

As already indicated, studies in North America (e.g. Alkon & Mares, 2012, Lehner, 2013) and Europe (e.g. Levidow, 2015; Morris & Kirwin, 2011) show that the primary motivations for these AFN are increased health and lower prices for consumers, but the broader implications for social and political change generally remained a low priority when factors as all. Thus, consumer-focused studies conducted in Asia, for example China (Si et al., 2015) and Japan (Riethmuller, 1994) seemed to be largely

restricted to individual consumer and households, and showed that consumers had little interest in social justice. In contrast, member consumers in this study were fundamentally committed to food and social justice, and had actively participated in large-scale, food related campaigns resisting the Korean government as it pursued neo-liberal economic growth.

The food sovereignty movement originated in Latin America (i.e. *Via Campesina*) and is arguably strongest in the Global South, and is usually led by peasant and Indigenous farmers working for wide-scale social and political change. The results of this project similarly represent a notable example of a food-related movement committed to social justice. Yet these cooperatives are distinct from the Food Sovereignty movement in that they simultaneously reach out to and reflect the needs of both farmers and consumers as they work together towards social justice. It is my hope that these Korean consumer cooperatives become models for inclusive alternative food movements engaged in similar social and political change in other parts of the world.

In this respect, these Korean consumer cooperatives represent an important success story in a literature dominated by local and small-scale initiatives and, unfortunately, by failure and the absence of notable social change. That these large-scale consumer organizations are able to reflect the needs and priorities of both urban consumers and farmers working to address shortcomings of global agri-food system and for social justice makes them much more powerful as a success story.

Table 7.1: Four dimensions of conceptual approaches to alternatives regarding the global agri-food system

	Economic dimension				Environmental dimension				Social dimension				Political dimension		
	Access	Affordability	stability	Trade	Environment	Organic farming	Safety	Small farm	Local community	Participation	Support rural	Self-sufficiency	Equity	Justice	Social change
AFN[1]			○		○		○		○	○	○		○	○	
Food citizenship[2]							○			○			○	Δ	
Food democracy[3]			Δ		Δ		Δ			○			○	Δ	
Food justice[4]	○	○			Δ		Δ				○		○	○	
Food security[5]	○	○	○	○			Δ								
Food sovereignty[6]	○		○	Δ	○	○	○	○	○	○	○	Δ	○	○	○
Hwang 2015[7]			○		○	○	○	○	○	○	○	○	○	○	○

○: important component, Δ: less important component

[1]: Si et al. (2015).
[2]: Lehner (2013).
[3]: Hassanein (2008).
[4]: Allen (2010).
[5]: Mechlem (2004) and Shepherd (2012).
[6]: Alkon & Mares (2012) and The Nyéléni 2007 International Steering Committee (2007).
[7]: Hansalim (2015) and icoop (2015)

7.4. Implications of thesis outcomes for food justice and social change

Gap between government policies and public requirements surrounding food

This study showed the differences in policy direction between the Korean public and government in terms of agriculture and food policy. Many Koreans were dissatisfied with government management of food safety (Chapter 3). In addition, most farmers criticized Korean agricultural policies for failing to reflect farmer concerns (Chapter 3, 4, 5). While the Korean government continue to negotiate Free Trade Agreements with 49 countries, they also continue to ignore consumer concerns about food safety and fail to protect domestic agriculture and rural communities because of potential violations with WTO regulations. These government policies have prioritized profits of industrial corporations at the expense of ordinary people and of social justice.

In general, Korean consumers insisted that the government establish food self-sufficiency policies that had hereto been neglected due to support for industry-led economic growth. Solution for raising food self-sufficiency revolved around changes to government policy that would in turn support farm household incomes and rural communities. Instead, government policies have resulted in the creation of a small number of large-scale farms through land amalgamation and the introduction of farming mechanization. In addition, the government has prioritized and defended large-scale land purchases in foreign countries as one of its food self-sufficiency policies (Kim et al., 2011). Those latter policies were criticized as especially inappropriate and unjust. The results of this study thus document the extreme gap between the public and government in terms of agriculture and food policies. In turn, while people have proposed and acted

on pragmatic approaches to food self-sufficiency, the government policies continued to be inadequate.

Public perception of the neo-liberal agenda

Over the past decade, several large food-related social movements have occurred in Korea. These include the rallies against US beef imports in 2008, the referendum regarding adoption of free school lunch program in 2011, and radioactivity contaminated foods following the Fukushima nuclear accident in 2011. Those events showed that food issues developed and readily evolved into larger political issues. Stakeholders in this study indicated that anti-US beef rallies were provoked by public anger against the Korean government but not the import of US beef *per se*. At that time, the Korean government was fast-tracking FTA negotiations with the US to enhance the export of industrial products. In order to facilitate the FTA, the Korean government reopened the beef market accepting unreasonable contracts as demanded by the US government and beef industry. Subsequently, the anti-US beef rallies turned into political conflicts between Korean people prioritizing public health and welfare, which was at odds with Korean government's pursuit of a neoliberal economy and support of private industry.

The school-lunch referendum held in Seoul in 2011 arose from political debate regarding policy that would either support lunch programs for students from low-income households or provide lunch for all students; ultimately residents chose to provide a free school lunch program for all students. Most regional governments have since decided to

adopt free school lunch programs and recommended that the school lunch centres be provided with domestically produced organic foods.

The two food-related events show that the Korean public's intention is to protect universal welfare and social justice. It sternly disapproved of opening markets to food imports, deregulation, and reductions in government spending. In this respect, the anti-US rallies and free school lunch program were characterized in this study as wider social movements that worked against the neo-liberal agenda.

Successful alternative food systems: consumer cooperatives and the school lunch program

Korean consumer cooperatives have shown remarkable growth over the last five years, reflecting consumer demands for safe foods and support for domestic organic farmers. These cooperatives represented 2% of total national agricultural market in 2010 and 16% of the national market share in organic agriculture (Korea Statistics, 2013). As Korean consumer cooperatives established their distribution systems, they were able to reduce the number of distribution steps and thus reduce costs to consumers. They provide their members with diverse education programs regarding foods and alternative food systems. Results of these studies show that member consumers have benefitted from these programs and are now more aware of equity and justice in food systems than conventional consumers.

These consumer cooperatives also have contributed to the growth and viability of organic markets and organic farms in Korea. Farmers in this study indicated that selling

their products to consumer cooperatives resulted in 10-50% of price premium compared to large retailers. During the study, school lunch programs were adopted by provincial governments across the nation and these cooperatives have grown even larger. Program organizers proactively organized collective purchases directly from farmers. In doing so, they are able to cut distribution costs and provide schools with organic foods at relatively low prices. Both consumer cooperatives and school lunch programs have built independent and mutually supportive local food systems apart from the dominant global agri-food system, distributed safe foods to consumers, and contributed meaningfully to farmer incomes and livelihoods.

Agricultural paradigm shift

Over the past several decades, global society has struggled with two paradigms in agriculture. Those two conflicting agricultural waves have strongly influenced agriculture and rural communities around the world. Agricultural neo-liberalism advocated by the WTO and FTA represents one such wave and the food sovereignty movement supported by *La Via Campesina* and peasants in the Global South represents the other (Desmarais, 2007; Grant & Boys, 2012; Tarasofsky & Palmer, 2006; Torrez, 2011). The WTO has attempted to force-fit trade by opening markets and building an enforceable system of trade rules. Non-discrimination, transparency, fairness, and support for less developed countries are the basic principles that underlie these systems as represented by the WTO (Clapp, 2006). However, countries from the Global South have criticized the WTO as reflecting and being substantially controlled by multinational

economic and political interests. Accordingly, and in direct contrast to its "truth claims", developing countries have been and remain largely excluded from WTO negotiations regarding the Agreement on Agriculture (Fung et al., 2010).

Under these circumstances, the increased popularity and growth of the food sovereignty paradigm and its movements were predictable. Advocates of food sovereignty propose that people world over have the right to control their foods and food systems (Altieri, 2009). Further, their insistence that agriculture be removed from WTO negotiations has been widely supported by peasants and Indigenous people in the Global South (Halewood, 2011). As the WTO negotiations have been deadlocked since 2005, Korean activists and food practitioners have proactively discussed and introduced many alternatives that are grounded in principles of food sovereignty most notably those associated with the country-wide consumer cooperatives movement.

Mobilizing agri-food movements; organizing citizen-consumers

This study shoes that both member and especially conventional farmers were highly negative about the future of Korean agriculture. In addition, over 70% of all surveyed consumers disagreed with the statement that Korean farmers are now fairly compensated. These circumstances are unlikely to be improved upon by farmer movements in isolation because the rural population in Korea now accounted for only 6% of the total population and because farmers now average over 60 years of age. In this respect, consumer agri-food movements represent an important agent of reform for agriculture and rural communities in Korea (Little et al., 2010). Regardless of age,

gender, class, or formal education, the public is now interested in food issues including food safety, food price, food production, food distribution, and food self-sufficiency (Edelman, 2001; Starr, 2010). Food justice, food sovereignty, fair trade, and ethical consumption are the ideology that is facilitating increased consumer awareness around these issues and that is mobilizing these consumer movements (Holt- Giménze, 2009). Development of the Internet in Korea provides increased opportunities for advanced communication and networking among these actors. The consumer cooperatives movement and the school lunch service movement both broke the chains of the globally integrated food distribution system in Korea (Micheletti & Stolle, 2007), in part because they themselves represent an integrated system that involved and reflected the needs of both member consumers and farmers at their core.

The organizing of consumer food demands represents an important trigger for the creation of alternative food systems (Lehner, 2013). As with the recent creation of environment friendly school lunch program, the next step is the creation of a direct food provisioning system from farmers to public institutions including hospitals, daycares, senior care centers, and army, which in turn represent the future of alternative food system in Korea. The distribution systems provided by consumer cooperatives will play a fundamental role in these evolving institutional food systems. Indeed, several provincial governors have very recently proposed that any such enterprises located in their provinces should only be provided with locally produced and environment-friendly foods (Chungcheongnam-do, 2012). The future of these alternative food systems in Korea is bright indeed.

References

Agarwal, B. (2014). Food sovereignty, food security and democratic choice: critical contradictions, difficult conciliations. *The Journal of Peasant Studies*, 41(6), 1247-1268.

Alkon, A. H. & Mares, T. M. (2012). Food sovereignty in US food movements: Radical visions and neoliberal constraints. Agriculture and Human Values, 29(3), 347-359.

Alkon, A. H. & Norgaard, K. (2009). Breaking the food chains: An investigation of food justice activism. *Sociological Inquiry*, 79(3), 289-305.

Allen, P. (2010). Realizing justice in local food systems. *Cambridge of Journal of Regions, Economy and Society*, 3(2), 295-308.

Altieri, M. A. (2009). Agroecology, small farm, and food sovereignty. *Monthly Review*, 61(3), 102-113.

Anderson, M. D. (2008). Rights-based food systems and the goals of food systems reform. *Agriculture and Human Values*, 25(4), 593-608.

Back, S., Kim, J. & Kim, C. (2011). *A study of evaluation and direction of agricultural structure policy.* Seoul: Korea Rural Economic Institute. [In Korean]

Chungcheongnam-do. (2012). *2012 plan for "three agricultural reform".* Chungcheongnam-do provincial government. [In Korean]

Clapp, J. (2006).WTO agriculture negotiations: implications for the Global South. *Third World Quarterly,* 27(4), 563-577.

Desmarais, A. A. & Wittman, H. (2014). Farmers, foodies and first nations: Getting to food sovereignty in Canada. *The Journal of Peasant Studies*, 41(6), 1153-1173.

Desmarais, A. A. (2007). *La Via Campesina: globalization and the power of peasants*. Fermwood Pub.: London.

Edelman, M. (2001). Social movements: Changing paradigms and forms of politics. *Annual Reviews Anthropology,* 30, 285-317.

Feenstra, G. (2002). Creating space for sustainable food system: Lessons from the field. *Agriculture and Human Values,* 19(1), 99-106.

Fung, K. C., Garcia-Herrero, A. & Siu, A. (2010). Developing countries and the World Trade Organization: A foreign influence approach. *The Journal of International Trade & Economic Development*, 19(1), 187-201.

Grant, J. H. & Boys, K. A. (2012). Agricultural trade and the GATT/WTO: Does membership make a difference? *American Journal of Agricultural Economics*, 94(1),1-24.

Halewood, P. (2011). Trade liberalization and obstacles to food security: Towards sustainable food sovereignty. *The University of Miami Inter-American Law Review*, 43(1), 115-136.

Hansalim. (2015). *2014 Hansalim annual report.: Getting along, more closely.* Retrieved from http://www.hansalim.or.kr/wp-content/uploads/2015/06/2014-annual_report_english.pdf

Hassanein, N. (2003). Practicing food democracy: A pragmatic politics of transformation. *Journal of Rural Studies*, 19(1), 77-86.

Headey, D. (2011). *Was the global food crisis really a crisis? Stimulations versus self-reporting*. Washington: International Food Policy Research Institute.

Hojjat, T. A. (2009). Global food crisis: Food versus fuels. Competition Forum, 7(2), 419-426.

Holt-Giménez, E. & Shattuck, A. (2011). Food crisis, food regimes and food movements: Rumblings of reform or tides of transformation? *The Journal of Peasant Studies*, 38(1), 109-144.

Holt-Giménze, E. (2009). From food crisis to food sovereignty. *Monthly Review*, 61(3), 142-156.

ICoop. (2015). *2014 ICoop Korea annual report: Ethical consumerism, a beautiful practice*. Retrieved from http://lemonhee.cafe24.com/ebook/ebook2//ecatalog.php?Dir=2&eclang=english

Kim, B., Lee, B., Jeon, I.,Yoon, J. and Min, Ja., (2011), *Project feasibility study on oversees agricultural development.* Seoul: Korea Rural Economic Institute. [In Korean]

Kim, Y. (2015). *Study for Pack, Geun-Hye government policy for temporary workers*. Seoul: Korea Labour & Society Institute. [In Korean]

Kim, W. (2010). Polanyi's double movement and neoliberalization in Korea and Japan. *Social Movement Studies: Journal of Social, Cultural and Political Protest,* 9(4), 373-392.

Lee, H. (2012). *What are the problems in MB agricultural budget?* Seoul: Agriculture and Peasant Policy Issue Report, 76.

Lee, S., Kim, S., & Wainwright, J. (2010). Mad cow militancy: Neoliberal hegemony and social resistance in South Korea. *Political Geography*, 29(7), 359-369.

Lehner, M. (2013). Alternative food system and the citizen-consumer. *Journal of Agriculture, Food system, and Community Development*, 3(4), 49-53.

Levidow, L. (2015). European transitions towards a corporate-environmental food regime: Agroecological incorporation or contestation? *Journal of Rural Studies,* 40(1), 76-89.

Levkoe, C. Z. (2006). Learning democracy through food justice movements. *Agriculture and Human Value*, 23(1), 89-98.

Little, R., Maye, D., & Ilbery, B. (2010). Collective purchase: Moving local and organic foods beyond the niche market. *Environment and Planning A*, 42(8), 1797-1813.

Mechlem, K. (2004). Food security and the right to food in the discourse of the United Nations. *European Law Journal*, 10(5), 631-648.

Micheletti, M. & Stolle, D. (2007). Mobilizing consumers to take responsibility for global social justice. *Annals of the American Academy of Political and Social Science,* 611, 157-175.

Morris, C. & Kirwin, J. (2011). Ecological embeddedness: An An interrogation and refinement of the concept within the context of alternative food networks in the UK. *Journal of Rural Studies,* 27(3), 322-330.

Riethmuller, P. (1994). Consumer cooperatives: a neglected part of the Japanese distribution industry. *Review of Marketing and Agricultural Economics*, 62(3), 389-398.

Shepherd, B. (2012). Thinking critically about food security. *Security Dialogue*, 43(3), 195-212.

Si, Z., Schunilas, T. & Scott, S. (2015). Characterizing alternative food networks in China. *Agriculture and Human Values,* 32(2), 299-313.

Sonnino, R. & Marsden, T. (2006). Beyond the divide: rethinking regulationships between alternative and conventional food networks in Europe. Journal of Economic Geography, 6(1), 181-199.

Starr, A. (2010). Local food: A social movement? *Cultural Studies-Critical Methodologies*, 10(6), 479-490.

Tarasofsky, R. & Palmer, A. (2006). The WTO in crisis: Lessons learned from the Doha negotiations on the environment. *International Affairs*, 82(5), 899-915.

The Nyéléni 2007 International Steering committee. (2007). *Nyéléni 2007 Forum for food sovereignty.* Sélingué, Mali.

Torrez, F. (2011). La Via Campesina: Peasant-led agrarian reform and food sovereignty. *Development*, 54(1), 49-54.

Valchuis, L., Conner, D. S., Berlin, L. & Wang, Q. (2015). Stacking beliefs and participation in Alternative food systems. Journal of Hunger & Environmental Nutrition, 10(2), 214-229.

Willkins, J. L. (2005). Eating right here: Moving from consumer to food citizen. *Agriculture and Human Value*, 22(3), 269-273.

Wittman, H., Beckie, M. & Hergesheimer, C. (2012). Linking local food systems and the social economy? Future roles for farmers' markets in Alberta and British Columbia. *Rural Sociology*, 77(1), 36-61.