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Erasmus

What is 'organic'?
**Politics of organic agriculture standard and certification
in Japanese organic agriculture sector**

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List of Acronyms

GM: Genetically Modified

IFOAM: International Federation of Organic Agriculture Movements

JAS: Japan agricultural standard

JOAA: Japan organic agriculture association

MAFF: Ministry of agriculture, forestry and fisheries

MOA: MOA Nature Farming Cultural Enterprise

WTO: World Trade Organization

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Abstract

This research investigates organic agriculture development in Japan through an analytical lens of the conventionalization and bifurcation theories. Organic farming is perceived as an alternative to industrial agriculture. However, it is argued that the farming is penetrated by logic of capital; then, structure of organic farming is getting closer to that of industrial agriculture. In the process, ideology-oriented organic food producers are marginalized while market-oriented producers benefit. These phenomena are called the conventionalization and bifurcation. There already conducted a number of case studies which examined the phenomena. In Japan, prior literatures reported signs of industrialization of Japanese organic agriculture sector; however, researches which employed the theories as analytical lens was not found. Thus, this research investigates Japanese case through the analytical lens of the conventionalization and bifurcation. In the chapter of theoretical framework, dimensions and factors of these phenomena are summarized from prior literatures to make focus of this research on the dimensions and factors clear. The factor that is focused in this research is public policies by the Japanese government. Then, Japanese organic agriculture development and the public policies are introduced in the chapter of findings. In following chapter of analysis, influence of the policies on the current structure of Japanese organic agriculture sector is investigated. This analysis is linked to look into the degree of conventionalization in Japan. As a result, this research finds out possibility of non-certified/small scale organic farmers' thriving within proceeding capital penetration in the Japanese organic agriculture sector. In addition to this, this case study of Japan suggests to incorporate international politics of organic agriculture standard and certification into not only study of the Global South but of the Global North.

Relevance to Development Studies

Organic agriculture is perceived as an alternative to an industrial agriculture that poses harmful impact on environment, human and society. Thus, the farming style is utilized in a number of rural development projects in both the Global North and South. Study of organic agricultural development and conventionalization reveal unequal social relationship, which are related to production and distribution of organic foods, among actors in organic food chain. This social relation include the Global North-South conflicts in organic farming development project.

Keywords

Organic agriculture, farming, standard and certification, Japan, conventionalization, bifurcation

Chapter 1 Introduction

1.1 Motivation of research

When I was child, almost 20 years ago, my grandfather and mother's place was covered with greenery. I remember lot of trees and forests, rice fields and sound of frog croaking. However, the place has been developed since then gradually, and we can only see lots of gray buildings and concrete pavements, and hear nothing. When I visited the place after I grew up, I felt miss and was doubtful about the way of our living changed. We can enjoy more convenient life than past, but is something missing? This experience has led me to development and agricultural studies. Can't we live together with nature?

1.2 Research Background & Statement of problem

Organic agriculture is regarded as alternative of industrial agriculture. Benefits of the farming that denies usage of chemical inputs are not only physical condition of producer and consumer but also preservation of local food tradition or community endangered by capitalist mode of agriculture(Lockie et al. 2005: 284). However, these days, it is argued by social scientist that organic farming is incorporated into capitalist and industrial way of production and marketing. This phenomena is called the conventionalization. Along with this, the bifurcation theory assumes bipolarization of organic agriculture industry: industrialized organic food producers who get high profit on one side, and ideology-oriented organic farmers who are marginalized in less profitable market on another side. Conventionalization and bifurcation thesis proposed by case study in California by Guthman(2014) and Buck et al.(1997) seem to have strong validity by showing universality of capital penetration into organic agriculture sector. However, case studies in other countries and regions show diversity of way of the penetration and heterogeneity of development pathway of organic farming in each region of the world: Europe, Oceania, Africa, Asia and so on. In Japan, there already exist literatures which examine the Japanese organic agriculture industry. Some of them advocate industrialization of the industry. However, no other literatures adopt conventionalization and bifurcation as theoretical framework in Japan. This section states the problem which surrounds organic farming: capital penetration into organic farming sector and industrialization of it, by explaining what conventionalization and bifurcation are. Then, how it is important to apply the theories in Japanese case is explained.

Definitions and mechanism of the theories

While the expectation for organic farming as alternative to industrial agriculture, organic food sector is criticized as its structure is getting close to that of its opponent: capitalist mode of agriculture. This phenomenon is described in conventionalization theory rooted in researches in California by Guthman (2014) and Buck et al. (1997). According to Lockie et al.(2005), the theory refers to "a process through which organic agriculture comes increasingly, as it grows, to resemble in structure and ideology the mainstream food sector it was established in opposition to(2005: 284-285)."

Buck et al.(1997) describe that the process of organic farming being resemble to capitalist mode of agriculture can be explained by applying classical agrarian question proposed by Chayanov(1924) or Friedman(1987) and same process of capital penetration into food commodity chain described by Goodman et al. (1987) (1997: 4). Organic farming is based on natural process of nutritious cycle on farm, hence room for human's manipulation of farming process and outcome is limited, and these are easily affected by natural condition. However, companies find way to make profit in both upstream and downstream of organic food production. In upstream, on farm input production which have to be done by each farmer is replaced by off farm production of agribusinesses, which is called appropriationism(Constance et al. 2008: 213). In downstream, as distance between farmer and consumer expands and commodity chain becomes longer, agribusinesses or companies join and control post production processes, such as retailing or processors, and take over most of profit made in whole chain. This is called substitutionism (Constance et al. 2008: 213). Through these two processes, barriers which organic farming once had are penetrated by capital, then structure of the sector is getting closer to capitalist mode of agriculture. This is a series of process of conventionalization. Moreover, as a result of this transformation, large scale farmers or agribusiness can join organic food production easier and conduct mass-production of few kind of crops, whereas small scale farmers diversifies farming. Former type of produces can supply huge amount of cheap organic product and dominate market, while latter producers are marginalized to less profitable market. This phenomena is called bifurcation(Buck et al. 1997: 8).

Politics of organic certification

Organic food certification is key factor which brings about conventionalization and bifurcation. According to Eden (2011), although Certification for ecolabeling, not only organic but fair trade and so on, is assumed to enhance power of consumers by giving them knowledge of production process to change ecological or human right violation in the process, it can lead to opposite result(2011: 174-175). Even certified product can put higher product and sell it, much of profit is deprived by large retailers (Ibid.: 174). In terms of organic farming, certification can be main factor of conventionalization. Because organic products gain more profit by price premium than conventional product, it is target of big agribusinesses which seek to gain profit from the farming without considering organic ideology constructed through organic movement(Ibid.: 180). Organic certification itself is facilitator of their joining to organic farming sector. According to Kratochvil et al.(2005), organic certification and standard facilitate "input substitution" by defining available input that makes it easier agribusinesses' converting off-farm input into marketable commodities(2005: 6) . Big agribusinesses produce cheap organic foods, which are competitor of small scale organic farmers, by minimizing production cost. Moreover, time and monetary cost is too heavy to manage for small farmers; so, their share in organic market become smaller. In United States, the federal Organic Food Production Act passed in 1990 facilitated more and more dominance of agribusinesses and marginalization of small scale and ideology-oriented farmers in organic market(Buck et al. 1997: 7).

Critiques to the theories

Conventionalization and bifurcation theses are criticized by a number of researchers. Bipolarization in structure of organic sector and organic farmers' practices, and oppression of small scale farmers, presented by Gutman are criticized as too simplifying reality and ignoring diversity of regional difference of organic sector's development by case studies(Guthman 2014).

Coombes et al.(1998) investigates historical development of domestic and export organic food market's structure and behavior of agribusinesses in New Zealand. The authors claim that conventionalization and bifurcation cannot lead to marginalization of small scale farmers who commit to ideology of organic in following two reasons. First, considering regional variation of relationship between capital and organic farmers, universality of organic farming sector's change assumed by supporter of conventionalization and bifurcation is doubtful. As for the research, prior researches mainly centered on North America and Europe provide narrow perspective for assessment of these phenomena; and, it assumes case study in regions or countries in different market condition from these regions will show alternative theory of change in organic sector. Second, stubbornness of simple commodity production in capitalist mode of production proposed by Friedman is underestimated in conventionalization theses(1998: 127-130).

Hall et al. (2001) states that the situation in Ontario does not support conventionalization theses. The research employs several dimensions of organic farmer's practices and structure of organic sector as indicator of conventionalization: farm size, cropping patterns and growth, share of the contract growing, profitability of the smaller producers vs. larger producers, labor and employment practices, and motivation and belief of farmers. It concludes that it is too early to draw general conclusion of the development of organic farming, and calls for more and more empirical study in various region or country and comparative study among these researches(2001: 420).

Thorsoe et al.(2014) also finds out various forms of organic market in Denmark organic sector, and concludes that transition of organic sector in the country does not fit to conventionalization but can be understood as "diversification" (2014: 9).

Schewe(2014) focuses on labor practices in New Zealand dairy industry. The research supports variability of organic sector in reality and oversimplified vision of conventionalization by examining labor practice of organic farmers in New Zealand (2014: 99-100).

Blanc et al. (2009) summarizes debates in congress of the European Society for Rural Sociology held on August in 2009. It states that "(I)there are different internal dynamics, different logics to different developments that are referred to as 'conventionalisation'...it is not one coherent dynamics"(2009: 34). In other words, there exists no certain criteria about level of production practices or structure of sector which determines conventionalized farmer.

Lockie et al. (2005) examines Australian organic sector. It measures scale of organic land, farmer and industry, market structure, and motivation and belief of farmers. The author finds that although there emerges polarization between large and small scale farmers in Australian organic industry, not only small but large scale producers shares organic ideology. Moreover, some large scale farmers adopt more environmental concerning practices than other farmers. Even new comers and long-standing farmers share same farm structure and scale, beliefs and practices. The research concludes that economic and ideological transition regarded as conventionalization is not determined trajectory but takes variety of forms (2005: 305)

These researches employ organic farmer's practices and structure of organic sector as criteria to assess whether conventionalization occurs in each country or region. They share similar conclusion that casts doubt on deterministic and universalized assumption of bipolarization of the sector and marginalization of small scale farmers as a only one trajectory of organic farming development. They also suggests more case study in various regions other than North America and Europe to find out diversity of the development and cross case study among countries or regions.

In Japan, some signs for conventionalization of organic food sector has been observed in its development history. However, current situation: dominance of non-certified organic

farmers and expanding scale of non-certified organic land, shows that the sector cannot be explained only by simplified bipolar and unequal relationship between large scale certified organic food producers and non-certified small scale farmers that are assumed in conventionalization and bifurcation theories. Some literatures about organic agriculture in Japan show evidences that can be understood as signals of conventionalization in Japanese organic food sector. For example, Kondoh(2015) states that conventionalization occurs in Japanese organic food sector because of joining of food retailers, which do not commit organic farming ideology defined by JOAA, into the sector (2015: 148). Hatano (2008) states declining number of organic farmers who commit to the ideology by adopting direct trading relation of organic foods with consumers. The author articulates one of the causes of this marginalization of ideology-oriented organic farmers to increasing number of large scale producers and food distributors in the organic food market(2008: 21). However, these literatures do not aim to adopt conventionalization and bifurcation as main theoretical framework or target of the research. Hence, it is important to investigate Japanese organic agricultural development through a lens of conventionalization and bifurcation by summing up previous literatures about organic agriculture development.

1.3 Research objective

This research aims to investigate how political relation among actors in the Japanese organic agriculture is composed and amended by public policies of the Japanese government. The conventionalization and bifurcation theories are used as the theoretical framework to observe this dynamics. Thus, this research starts from looking into situation of the Japanese organic agriculture sector. Then, crucial organic agriculture policies in the sector are found out. Finally, political relation of production and distribution of organic foods in Japan is analyzed. In the end, this research contributes to study of organic farming development and conventionalization debate by adding Japanese case study that is analyzed through a lens of the conventionalization and bifurcation theories.

1.4 Research question

The research question in this paper links to the research objective. Thus, main question is “how has structure of Japanese organic farming sector changed since adoption of national certification(organic Japan Agricultural Standards)? Whose interest are promoted and protected behind public policy including the standard and certification?”. Sub questions are components of this main question. Thus, they are: 1, What is structure of current Japanese organic sector?; 2, What are the key policy in the sector?; 3, Whose interests are promoted and protected?

1.5 Methodology

Methodology

This research is explorative in that it investigates Japanese organic agriculture sector by using conventionalization and bifurcation theory as main theoretical framework of analysis, which no other literatures within which the writer of this paper could found did. This research is based mainly on secondary data: documents, other literatures, statistics and so on. Primary data: interview of key informants, are utilized as supportive data. Detail of each data are explained below.

Primary data is collected by face-to-face and e-mail interviews. Interviews are semi-structured. The number of interviewees are 6. Interviewees are :an officer of organic agriculture department in the Ministry of Agriculture, Forestry and Fisheries(MAFF); two officers of the MOA Nature Farming Cultural Enterprise(MOA); Ms. K who is Professor in Kokugakuin university in Japan and director of the Japan Organic Agriculture Association(JOAA); Mr. F who is a member of JOAA, director of organic agriculture association in Shimane prefecture and organic farmer in the prefecture; an officer of organic agriculture department in Akita prefecture government. Interviews for MAFF officer, MOA officers and Ms. K were conducted directly, and these for Mr. F and the local government officer in Akita prefecture were by email . Secondary data is statistics or reports of investigations published by government and MOA, and literatures of other researchers. The table 15 summarizes questions which each interviewee is asked. The table is cited after conclusion chapter. Secondary data consists of Statistics, documents, reports and researches from central and local government, private institutions and previous researches.

This paragraph explains how each data were collected and analyzed. As for primary data, interview of key informants, interviewees who are or belong to each actor of Japanese organic food sector were chosen. People of central government, local government, social movement, farmers' organization in certain prefecture are chosen as interviewees. There exist other actors such as agri-input businesses, retailers, food distributors, exporters and so on. However, interview for people who belong to these actors could not be conducted due to time constraint of the research. Besides, some people refused to have interview because they cannot have the time. The writer contacted and asked them to have interview via telephone and email. Some interviews were done face to face, but others are done by email. This is also due to the time constraint. The officer of central government, two officers of MOA, and director of JOAA(professor of one Japanese university) were interviewed directly, but interviews of the officer of Akita prefecture and director of organic farmers' organization in Shimane prefecture were done by email. All interviews were done by Japanese. All face to face interviews were recorded under permission of interviewees. Contents of interviews which were used in this article were translated by the writer.

As for secondary data, it consists of statistics, documents, reports and researches from central and local government, private institutions and previous researches. These data were collected via Japanese and English online article web-sites, via online website of institutions such as Japanese government or JOAA, in library in Japan and Netherland, or donation from the interviewees cited above. Following research engines were used: the Google scholar, Google, Cinii, Springer and so on. In these online article web-site, the writer used words 'organic farming', 'organic agriculture', 'conventionalization', 'bifurcation', 'industrialization', 'public policy', 'certification', 'standard' in searching literatures. Some statistics or reports of organic farming were collected in online websites of Japanese government or JOAA. Literatures of organic farming were also collected in public library in Tokyo, library of Ritsumeikan university in Japan, library of the International Institute of Social Studies in Netherland. The director of JOAA and officers of MOA also provided some literatures, articles and reports. These secondary data consists of Japanese and English ones. Translated Japanese documents, literatures or reports to English were rarely available; thus, Japanese ones were translated by the writer.

Ethical consideration

Some interviewees agreed for writing their name on this paper, but all names are hidden for considering ethics. All face to face interviews were conducted in normal working days, so the time of interviews were limited within two hours not to bother their working. The amount of email to the other interviewees were also limited within 3 or 4 responses due to

the same reason. The officer of MAFF asked me not to consider all his statements and responses as representative of the ministry but to regard as his individual opinion as a public officer. Thus, this research uses his statement as support of other secondary sources which state same opinion as him.

Chapter 2 Theoretical framework

This research utilizes conventionalization and bifurcation as theoretical frameworks. Before going to research findings and analysis chapter, this chapter describes how the theories are used. Firstly, variation of organic agriculture development, and conventionalization & bifurcation among countries, especially those of non-western countries which are not shown in the chapter of research background, are explained. Then, dimensions and factors of the conventionalization are described. These dimensions and factors are organized by summing up case studies of organic agriculture development both in western and non-western countries. Some of the dimension and factors are utilized as analytical tool of Japanese organic agriculture development in this research.

2.1 Variation of organic agriculture development, and conventionalization & bifurcation among countries

The literatures introduced in previous chapter are case studies in Europe, United States or Oceanian countries. However, a number of researches about organic agriculture development, the conventionalization and the bifurcation were also conducted in non-western countries. For example, Huichen(2015) concludes that Chinese organic agriculture development is backward development model opposing to developed countries organic agriculture development(2015: 7-8). In China, expansion of organic agriculture industry was led by food export company at first. However, as organic food market and consumer demand for environmental friendly and non-contaminated food by agri-chemicals expand, organic food industry was diversified in three sectors: the company leading model, the farmers' cooperative model, and the participatory guarantee systems model . Especially, the participatory guarantee systems model is characterized as direct trading relationship between farmers and consumers, and local food distribution. In this sense, Chinese organic agriculture development follows opposite pathway of industrialization of organic agriculture.

Vandergeest(2009) looks into Thailand alternative agriculture development. Although focus of the research is not in examining conventionalization but in "how models for doing alternative agriculture have traveled and been remade in different agrarian sites(2009: 3)", it shows important insight of developing countries' alternative agriculture which is related to conventionalization. Alternative agriculture, in which organic farming is standard, in global South is different from that of global North in that it is incorporated into a field of development such as rural, economic or social development. Development project which utilizes alternative agriculture as tool of improvement promotes promote farmers in global South to export organic or eco-food to food market in global North. In this process, production scheme is modified to fit with certification of global North; thus, it is no longer based on local knowledge and technique(Ibid.: 24-26). This Vandergeest's finding can be understood as a process of inclusion of global South farmers into conventionalized international organic food market. In the market, local discourse of alternative agriculture is replaced by discourse of Global North which enable certification agency or food retailer in global North make benefit.

Makita(2012) investigates confluence of organic farming and farming for fair trade in relation with genetically modified(GM) cotton production. While inclusion of India organic farmers into international organic product market governed by global North production discourse, same as Vandergeest, is mentioned, the author says that confluence of organic and

fair trade initiatives pushed Indian farmers not into international-level conventionalization process but into other kind of agrarian capitalism: conventional GM cotton production.

Scott et al. (2009) researches how increasing corporate influence in organic food industry emerges in Southeast Asia by selecting Thailand, Vietnam and Indonesia as cases. The research shows how agri-food corporations have taken over organic food sector which was, at first, developed by social movements and NGOs which work with farmers. According to the authors, development of alternative agriculture in Southeast Asian countries is market-driven model. At first, alternative agricultural practices emerged in response to modern agriculture that were expanded by Green revolution. It mainly focused on subsistence production and local distribution. This was led by NGOs activities. However, as organic foods market was recognized as new frontier by food buyers in Northern countries, production for certified organic foods has expanded led by development donor and NGOs. Government also joined this tide by setting national standard and certification. This current tide of expanding certified organic foods production in Northern certification scheme causes increasing structural power of corporate agri-food industry. While corporations benefit from involvement of government and some NGOs into certification process, there are other NGOs and social movements which oppose to this corporate organic agriculture. However, each country's development pathway is slightly different in "the rate of growth, the relative orientation to domestic versus export market, and the forms that organic farming takes.(2009: 78)"

Visser et al. (2015) shows that environmental friendly farming practices are perceived in the context of food sovereignty. Main purpose of the article is not to discuss organic farming but Russian context of food sovereignty; however, it gives important insight to study organic farming development in Eastern Europe. Food sovereignty movement in western Europe takes form of explicit declaration of food sovereignty discourse and obvious action. On the flipside, in Russia, resistance to state and industrial agricultural sector is not expressed in such a explicit way but in everyday practice. Therefore, environmental friendly farming practices which is key component of food sovereignty also does not be expressed in a form of social movement or profession of the farming style(Ibid.: 516-517). It can be inferred that development model of alternative farming in Eastern Europe is not same as that of western Europe.

These literatures show how organic agriculture industry develops in non-west countries. There are some features which are extracted by the literatures. First, organic farming in Asian countries researched by Huichen, Vandergeest, Makita and Scott et al. show North-South relation in organic foods trading as one crucial factor of organic agricultural development in the Global South. Especially, United states and Europe have huge influences because they are main import countries of organic foods produced in the Global South and have power to set organic foods standards and certification; even though situation of China and Southeast Asia are different. Especially in Southeast Asia, organic agriculture featured by export to developed countries are promoted through NGOs' or donor's development project, or state's agricultural project. In this process, production scheme of organic products is transformed from local or traditional context to global North' context. Simplified standard and certification of global North, which does not include social or cultural aspect of local context but only cites technical aspect of production, benefits consumers, certification agencies, and agribusinesses in the Global North. On the flipside, farmers in the Global South may not be able to receive ecological, social or cultural benefit of organic farming. In this sense, organic agriculture in global South is incorporated into conventionalization of global North(Vandergeest 2009, Makita 2012).

2.2 Dimensions and factors of conventionalization

Conventionalization can be observed in a number of dimensions in organic agriculture sector. Researches of organic agriculture development employ some dimensions as analytical target, and investigate it. Table 1 shows dimensions of conventionalization which are employed by literatures related to organic agriculture development and the conventionalization debate. These literatures include the case studies in North American, Oceanian and West European countries introduced in the chapter of research back ground and case studies in countries of other regions showed in this chapter. By incorporating Guthman (2014) into the table, dimensions of conventionalization can be summarized in below

Table 1
Dimensions of conventionalization

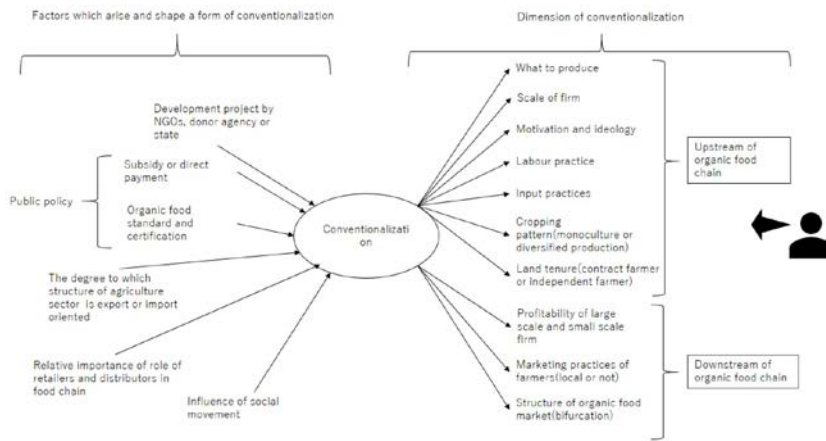
Dimension of conventionalization		
Category of dimensions	Dimensions	Related concept or theory
Upstream of food chain	Scale of firm	
	Motivation and ideology	commodification of organic food
	Labour practice	
	Input practices	input substitution
	Cropping pattern(monoculture or diversified production)	
	Land tenure(contract farmer or independent farmer)	
	Profitability of large scale and small scale firm	
Downstream of food chain	What to produce	
	Marketing practices of producers(local or not)	
	Structure of food market(bifurcation)	bifurcation

Source: made by the author of this paper

The dimensions of conventionalization is what observers(researchers) can analyze to what extent conventionalization occurs or not in his/her target case by observing them. In addition to this, there are factors which arise or shape a form of conventionalization. Figure 2 summarizes both dimensions and factors of conventionalization.

Figure 1

List of factors and dimensions of conventionalization



Source: made by the autor of this paper

Items on right side of a circle that is named ‘conventionalization’ are the dimensions of the theory. An icon of a human is researcher, and an icon of arrow means how the researcher observe the phenomenon. In other words, the researcher observes whether or to what extent conventionalization occurs or not by looking into these dimensions. These dimensions are categorized in two: one is upstream of organic food chain, and another is downstream of it. Items on left side of the ‘conventionalization circle’ are the factors which give birth and shape a form of the conventionalization. These factors and dimension were derived from the case studies cited above.

This research observes Japanese organic agriculture development through following dimensions: ‘what to produce’, ‘scale of firm’, ‘input practice’, and ‘structure of market’. Then, current situation of these dimension are investigated by employing ‘public policy’ as a factor which puts influence on them.

Chapter 3 Finding chapter: Structure of current Japanese organic agriculture sector

This chapter explains structure of current Japanese organic agriculture sector and public organic agriculture policy. At first, brief history of Japanese organic farming is summarized. Then, public policy of the Japanese government is described. At last, structure of organic food chain is described in upstream and downstream of the chain.

3.1 History of Japanese organic farming

This section explains brief history of development of Japanese organic farming since the end of World War 2. There has been three major boom of organic farming in Japan since the time. These boom show how Japanese organic farming has reflected consumers increasing demands for safe and healthy food and has changed by being affected by social and economic transition in Japan. According to Imai (2015), first boom started from 1970s and continued until early of 1980s. Second one was from late of 1980s to 1990s. Then, third boom has continued since 1990s and until now(2015: 32-33).

Organic farming first emerged as discipline of a religious group named ‘sekaikyuu-saikyou’ in 1943(Formsgaard et al. 2014: 150-151). The group is based on Japanese classical philosophy of nature and eating habit, and antipathy to industrial agriculture. This is because that chemical fertilizer or pesticide caused health issue or degradation of productivity of land; moreover, mercury used to produce chemical fertilizer brought about huge pollution.

From 1970s, organic agriculture expanded as social movement. This is first organic food boom in Japan (Imai 2015: 32). This tide was led by consumers who concern health issue of food. Main actor of this movement were women who were mainly in charge of household work and health security in family at that time. Moreover, civil society joined this organic movement. Japanese Organic Agriculture Association(JOAA) that was first not religious and nation-wide civil association(Formsgaard et al. 2014: 157) was established and gathered researchers, doctors, producers and consumers who work on organic farming. In this period, organic farmers sold their crops directly to consumer. The association named this relationship as ‘*teikei*’ and established ten *teikei* principles. *Teikei* refers to “mutual agreement on planning and pricing” and aims to establish not only trading relationship but also build trust and mutual relationship which are difficult to be constructed in conventional market relationship(Sugihara 2006: 25-26). Sustainability of this partnership is highly depend on consumers’ ethical motivation because they have to join farming and food distribution to help farmers (Ikegami 2014: 3). Furthermore, they have to buy all crops grown by farmers (Ibid. : 3). Hence, organic movement in 1970s is understood as social movement based on Japanese organic ideology. In the first boom of organic farming backed by consumer-led social movement, there did not exist retailers or supermarket which sell organic foods. Most of organic food distribution was based on *teikei* relation(Imai 2015: 32).

However, this situation changed in the second movement since 1980s. *Teikei* ruined gradually since that time due to change in both producer and consumer sides. First, more and more women started to join in job market to work outside home; hence, it became difficult for them to manage *teikei* tasks(Sugihara 2006: 28). Second, organic farmers were hated by other conventional farmers, who were majority of village in most case, in village because

¹ *Teikei* means “co-operation” in Japanese according to online dictionary of Japanese(Kotobank: no page).

their production and marketing strategy were different from those of conventional agriculture (Ikegami 2014: 3). Growing number of consumers who favored easily available organic food without tough works which are obligation of *teikei* partnership led to emergence of organic foods distributors. The distributors are not totally conventional retailer because they sustained organic farming principle, like concern for environmental issues caused by industrial agriculture, and functioned as intermediation of communication between farmer and consumer (Sugihara 2006: 29-30). Besides, conventional food retailers or supermarkets started to join into organic food chain since the time (Ogawa et al. 2007: 112). According to Ikegami (2014), diversification of distribution channel caused by entry of retailers or supermarkets to organic food chain was also supported by differentiation strategy of organic cooperatives who sought to add high value on organic foods (2014: 3-4). This change in organic food commodity chain affected farming practice of organic farmers. Supermarket demanded large amount of same quality foods, so farmers had to change their diversified farming to mass production of few kinds of crops (Ibid.: 4). However, mass-production is far from organic principle; thus, JOAA criticized the farming method. Even though consumer started to leave from *teikei*, this type of marketing was still dominant. Hence, there existed two types of organic agriculture: one was based on ideology of organic and another was more market-oriented from 1970s to 1980s. In sum, the second organic food boom is characterized as the growing number of distribution channel and the amount of food which reflect social change in Japan (Ibid.: 4).

The third boom since 1990s has been the time the amount of imported organic product has increased because of establishment of organic certification (Sugihara 2006: 33). In 1990s, the Japanese government started to establish organic standard and certification. The national organic standard was established in 1992, and national certification too in 2000. However, monetary and time costs for getting certification and keeping being certified are too heavy for small farmers, so the number of certified farmers has remained small until today (Sugihara 2006: 33-34). Besides, the amount of imported organic foods were six times more than that of domestically produced ones in 2004. Thus, more and more Japanese consumers can get foods which are not contaminated by chemical products due to the imported foods; but, they are getting separated from the Japanese organic farming ideology (Sugihara 2006: 33).

In sum, Japanese organic agriculture development started as social movement at first in 1970s. Distribution channel of organic foods was only direct relationship between organic farmers and consumers at that time. Then, the distribution channel was enlarged from local level to national level through 1980s and 1990s. Since 1990s, national organic agriculture standard and certification opened domestic organic foods chain to international scale. In this sense, the standard and certification is an important factor that shapes Japanese organic agriculture sector since late of 1990s.

3.2 Public organic agriculture policy of the Japanese government

This section explains main organic agriculture policy by the Japanese government. As cited above, influence of the Japanese government's public policy, especially national organic agriculture standard and certification, is a crucial factor in dynamics of Japanese organic agriculture development. In addition to this, organic food regulation policy is related to politics of organic agriculture development and conventionalization as described in chapter 1.3. Thus, this research picks up the national organic agriculture standard and certification as an analytical focus. Firstly, history of national organic food standard and certification is explained. This history is written in relation with response of JOAA toward making of the standard and certification to show who's interest are promoted and protected in following

analysis chapter. Secondly, support project for organic agriculture sector by MAFF is explained.

History of national organic food standard and certification in relation with social movements' opposition to the standard

Ministry of Agriculture, Forestry and Fisheries(MAFF) modified law of Japan Agricultural Standard(JAS) to decide and incorporate national organic agricultural production standard in the law in 2000. Then, national organic food standard and certification was implemented from 2001. However, a series of action to set national organic food standard had been opposed and criticized by social movements led by JOAA and consumer organizations.

Organic farming started to gather attention within Japanese government in 1987 when one senator belonging to the Liberal Democratic party that was the ruling party in congress established organic farming senators' studying club in the party (Honjyo 2002: 19). At the same year, MAFF introduced organic farming as one of high value product in its annual report. This was the first time organic farming was recognized in the government. According to Honjyo (2002), there were two reasons of this government recognition for organic farming. One was expansion and diversification of organic foods market which gathered attention of not only natural food but conventional food distributors and retailers. Another is action of Western countries. Both United States and EU started to organize public policy and food standard of environmental friendly agriculture in 1980s. Following 1988, fake organic foods were exposed by the fair trade commission; and, the issue became huge scandal (2002: 18). MAFF set a department of organic agriculture in the ministry to deal with the scandal and organize organic agriculture policy in 1989. In 1992, the department of organic farming was renamed as the department of environmental friendly agriculture. MAFF had started to plan to make the production guideline of organic food in 1991, and the ministry set the guideline in 1992. Although this guideline did not have any legal binding force such as sanctions, but JOAA opposed it because the association considered that organic farming in Japanese context does not need such a production standard² (JOAA 2000: no page). Nevertheless opposition from social movements, the guideline was set in 1992. Honjyo (2002)states that legislation of organic food standard and certification law in United States in 1990 and EU in 1991 influenced on MAFF's policy at that time(2002: 22). Besides, there existed demand from WTO to set national organic food standard that have commonality with the standard of CODEX committee³. Soon after this establishment of the guideline, MAFF started to plan to modify law of Japan Agricultural Standard to incorporate organic food standard into it (JOAA 2000: no page). This was the start of the national organic food standard and certification legislation that have legal binding power. JOAA opposed again to this MAFF's action because it concerned a simplification of its organic food principle into the government-made production scheme(Ibid.: 2000). However, the law was passed in 1999. Then, the Japanese organic food standard and certification was implemented since 2001. JOAA also criticized MAFF in that a committee that was in charge of the standard making mostly consisted of government officer and enterprises which regard organic food market as new profit-making field. Farmers or social activists was excluded in the process of standard making(Ibid. : no page).

² JOAA considered that organic farming should be developed via direct relationship between producers and consumers that does not require any certification from third person.

³ CODEX committee belongs to WTO and make international standard of food production or labeling. The TBT agreement legislated in the WTO in 1995 requires every member countries to fit national food standard with the international standard(International Nature Farming Research Center: no page).

Organic agriculture support project of the Japanese government

MAFF aims to expand share of organic agricultural acreage in total agricultural acreage in Japan from 0.5 % to 1.0% until 2018 (MAFF 2018 b: 7). To attain this goal, MAFF sets four main strategies: 1, support for organic farmers; 2, support for distribution and marketing; 3, improvement of organic agricultural technique; 4, advertisement of organic agriculture and national organic food label to consumers(Ibid.: 7). MAFF's Organic agriculture policy in 2018 consists of three policies(Ibid.: 1). First is a direct payment for farmer's organizations which adopt environmental friendly agricultural practices defined by government law such as reduction of chemical inputs or manuring. However, this payment is not only for organic agriculture but also for less-chemical input agriculture. Besides, MAFF provides other two kinds of direct payments: one is a payment for farmers in disadvantaged area and another is a payment for organizing agricultural infrastructures(MAFF 2018 a: 3). The amount of budget allocated to the payment for organic and environmental friendly farmers was the smallest in these three payments. Second policy is a project to build stable supply chain of organic and eco foods. According to Ogawa et al.(2007), one of the main problem of Japanese organic food market is unstable organic food supply chain due to majority of small scale producers and their small production lot(2007: 31). MAFF (2018 b) also states that retailers or distributors have difficulty in buying organic foods because organic food producers are geographically dispersed in addition to the issue of production lot. The officer of MAFF who was interviewed by the author also stated the same thing. To attain the goal of organic development(to increase share of organic agriculture acreage), MAFF try to make organic food distribution system more stable and geographically bigger. This is done by expanding production lot of each organic food producer. Practical plans are connecting producers and retailers or distributors and making whole-year organic food supply chain. Third policy is support for food exporter, retailer or processor who aim to get national certification to export organic foods. These enterprises or organizations can get subsidy from the government. This policy is conducted in the framework of the MAFF's food export promotion project. The ministry set a goal to increase export value of foods to 1,000,000,000,000 yen(almost 7,810,000,000 euro) to enhance competitiveness of Japanese food in international free trade market(MAFF 2018 d: 1). In this project, organic food is considered as one of high value food in the international market according to and officer of MAFF. MAFF sees EU as an export target region because of growing organic foods market in there(MAFF 2018 b: 6). Main organic foods which are introduced as high value export food to EU are tea, konjac and processed plum(Ibid.: 4). Table 2 shows how the amount of these organic foods exported to EU had increased from 2014 to 2016.

Table 2

Major exported organic foods to EU from 2014 to 2016

Major exported organic foods to EU (ton)			
Organic foods/Year	2014	2015	2016
Tea	222.7	360.4	444.3
Konjac	13.4	18.2	21.7
Processes plum	7.4	24.3	44.6

Source: MAFF(2018)

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All foods show dramatical increase during the period: the amount of tea had increased almost 200%, konjac 162%, and processed plum 603%.

3.3 Definition of organic farming in Japan

As described in chapter 3.1.1, organic agriculture policies of the Japanese government have huge influence on development of organic agriculture sector in Japan. In this section, main definitions of organic agriculture in Japan and transition of organic farming ideology are described. First, three organic farming definitions are introduced. Two are that of JOAA and the government. The other is that of International Federation of Organic Agriculture Movements(IFOAM). The federation affected making of other two definitions. Then, transition of organic farming ideology in Japanese organic food market is explained.

Definition

Table 3 shows each institution's definition and production standard of organic farming.

Table 3
Comparison of organic definition among MAFF, IFOAM and JOAA

Difference of definition and standard of organic farming between JOAA and government			
Institution	MAFF	IFOAM	JOAA
Definition	"organic farming is defined as the farming that minimizes impact along with production process on environment as much as possible by not utilizing chemical fertilizer and pesticide, and genetically modified technique."	"Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved."	"Organic food is the food that is produced in a way which does not use chemical inputs, bio-medicine, radioactive substance or genetically modified seed and product, but utilizes local resources and natural potential as much as possible."
Standard	The standard is align with codex organic food production standard. Main contents: to keep soil in good condition by manuring; to produce in land where chemical inputs are not put at least 2 years; seed and seedling must be organic one; not to use genetically modified radioactive techniques; protecting land from contamination by chemical inputs or agro-medicine. The standard set list of allow able and non-allow able organic inputs.	"Organic agriculture is based on: the principle of health; the principle of ecology; the principle of fairness; the principle of the care"	JOAA's standard consists of two sections. First section is about 10 principle of what organic farming aims to do. Second section is technical standard which is align with Japanese government's and IFOAM's organic farming standard.

Source: edited by the author based on JOAA(2000: no page), MAFF(2016), IFOAM(2014 :9)

The table shows different perception toward organic farming based on the institutions. Definition of Japanese government only mentions technical criteria and environmental concerns. IFOAM's definition encompasses broader range of issues such as human health or self-sufficiency of resources. Comparing to these two definitions, JOAA's definition includes much more issues. In addition to ecological concerns, human health or technical criteria, it encompasses traditional Japanese organic principles: self-sufficiency of food and resources, and direct relationship of farmers and consumers(*teikei*), economic sustainability of farmers and so on. Background of each institution can explain this different focus on organic farming.

As mentioned chapter 3.1.2, Japanese Agricultural Standard of organic agriculture(JAS) was established in 1999 under pressure from WTO that demanded to set national organic food standard which a standard of CODEX committee(Honjyo 2002: 34). Hence, the standard is align with organic guideline of codex committee in WTO which is adopted by other major organic foods exporting or importing countries in the world. The countries which have equivalent organic agriculture and food standard and certification with Japan are United States, European countries or Australia(MAFF 2016: 1).This CODEX's standard is based on standard of IFOAM. IFOAM stems from organic farmers' association in France and has expanded international scale(IFOAM: no page). Thus, international organic agriculture and food regulation scheme is composed by European organic context.

With regard to JOAA, main component of organic farming discourse had been *teikei* since its establishment. However, JOAA incorporated the government's standard in own organic farming standard after legislation of the standard since usage of the term '*yuki*'⁴ and 'organic' is prohibited by the standard(JOAA 2000: no page). The association also adopted standard of IFOAM because it includes not only technical but social, cultural and ethical aspects of organic farming which share similarity with JOAA's organic farming principle. However, JOAA did not completely copy organic farming definition and standard of these two institutions. *Teikei* is still mentioned in its standard. Besides, JOAA's standard reflects uniqueness of Asian organic farming into its standard, which is not included in both the standard and definition of the government and IFOAM. In addition to this, the association does not agree IFOAM's organic farming policy. This is because that market-oriented approach, which is influenced by organic retailers or processors who seek to make organic foods more valuable products in international food market, has huge influence on the policy(Ibid. 2000: no page).

This section shows difference in organic farming definitions and standard among three institutions: JOAA, the Japanese government and IFOAM. The government's definition and standard are totally align with those of CODEX committee in WTO; hence, are under influence of IFOAM's European organic farming context. Even though JOAA keeps organic farming ideology and insists to reflect the Asian organic farming context which is not mentioned in other two, the association could not avoid influence of the government and IFOAM. These findings shows huge influence of IFOAM(European context)'s discourse in Japanese organic agriculture sector.

Transition of ideology in downstream of organic food chain

Since the legislation of the national organic food standard and certification, a number of changes happened in Japanese organic agriculture sector. This section explains transition of ideology as one of them happened in Japanese organic food chain. The other changes in the chain are explained following sections. At first, organic farming in Japan started as a social movement in 1970s. A term '*yuki*'⁵, which is used as synonym of a English word

⁴ The Japanese word '*yuki*' means "having life and being able to live by itself" and "dynamics in which every its component is connected each other" according to online dictionary of Japanese(Kotobank: no page). Detailed explanation is done in next section.

⁵ *Yuki* is Japanese word that means a law which circulates in whole universe(JOAA 2000: no page). This term was used by Teruo Ichiraku, who established JOAA in 1971 at first. He practiced farming which does not rely on chemical inputs, and put this name on his farming method which is align with law of nature. He translated a book "Soil & Health" written by Albert Howard into Japanese, and used *yuki* as a synonym of a English word 'organic farming' used in the Howard's book. Initial idea of him and JOAA about organic farming as social movement is restructuring of modern Japanese society by opposing industrial agriculture and Japanese government's policy which promote modernization of agriculture(JOAA 2000: no page).

'organic' in Japanese today, was used in a leading association of organic farming social movement: Japan Organic Agriculture Association(JOAA), to express its organic farming principle. However, what *yuki* means varies among institutions, especially between social movements and government, since the establishment of the national organic standard and certification in 2000. As the national standard does not allow to put the word *yuki* or organic on foods without getting national certification, what the word '*yuki*' means, at least in Japanese food market, is defined by Japanese government. However, definition and standard of '*yuki*(organic)' farming is obviously simplified comparing to those of JOAA. It means that farmers are excluded from organic food market unless they get national certification even if they practice organic farming based on principle of JOAA.

At first stage, 1970s, self-sufficiency of foods and resources in local-level was the core principle of Japanese organic farming. This principle aims to restructure disconnection between food producers and consumers(or farmers in rural area and consumer in urban area) which arose in a process of modernization of Japanese industrial structure, through building direct food trading relationship between farmers and consumers and local food & resource circulation (Association 2000: no page). This idea came from opposition to modernization of agriculture and the state's policy which promotes it since 1950s. Adachi(1991) explains how usage of the term '*yuki*' has changed and differed among actors in organic agriculture sector since 1970s. As stated above, the term '*yuki*' firstly meant a law which circulate nature; thus, it was used in the name of farming that does not rely on chemical inputs and is align with cycle of nature. The social movement mainly led by JOAA aims to "fix distortion existing in agricultural techniques, labor situation, food distribution and consumption structure, and state's agricultural policies(Adachi 1991 : 11)" by organic farming. JOAA states that the;

"harmful impact of agri-chemical inputs is systematic problem caused by current distribution, consumption and state's agricultural policy. Besides, expanding market distribution system and agri-industries separates farmers and consumers. This separation distorts a way of production and consumption. Consumers also supports this systematic distortion unconsciously. Hence, it is needed to create direct (face to face) relationship between farmers and consumers to fix the problem."(JOAA 2000: no page)

This direct relationship is called '*teikei*' in Japanese. *Teikei* (Japanese word that means direct trading relation between farmers and consumers), which is explained as unique characteristic of Japanese organic farming, is a key principle which supports self-sufficiency of organic farmers(Ibid.: no page). Expanding food self-sufficiency from the farmer level to consumer and local level is also included, but first priority seems to be in farmer-level self-sufficiency. In JOAA's context, the fix of agricultural sector is supposed to be done by direct trading relationship between farmers and consumers. JOAA published 10 principles of the direct relationship in 1978. The principles are following: (1) it is not only trading but also human relationship; (2) it is based on planned production contracted between producers and consumers; (3) consumers have to buy all foods which farmers produce; (4) price of foods is set based on mutual principle between producers and consumers; (5) interaction between producers and consumers has to be strengthened; (6) foods are distributed not by third person but farmers; (7) producer and consumer *teikei* group should be run in democratic way; (8) the relationship is learning process of consumers; (9) producer and consumer *teikei* group should not be large scale; (10) members of the relationship should try to fulfill these principles(Association 2000: no page).

However, the term '*yuki*' was increasingly used as a term which means high value products as the distribution channel of organic foods was diversified and expanded since latter of 1970s. The government started to regard organic farming as a policy target; but, government

activity mainly focuses on the technical aspects of the farming. Hence, the government's actions do not incorporate principles that organic farming social movement put emphasis on and narrows down the meaning of *yukei*. Adachi (1991) mentions that not only agri-businesses but non-agri-businesses and exporters who needed national level organic foods standard sought to set the state's organic standard around 1990s(1991: 15). Besides, organic food producers who are not familiar with the social movement's principles tended to rely on off-farm organic inputs rather than making organic inputs by themselves at that time. Consumers also demanded restriction for organic foods because of confusion in organic market filled with fake or vague organic labels. These two issues made the government set the administrative office of organic foods and start shaping and implementing organic standards and certification. Then, national organic food standard and certification was implemented in 2001. This law prohibits usage of food label or logo which are named *yukei* or 'organic' without being certified by certification agency. It means farmers cannot join organic food market if they do not get the certification, even if they practice organic farming methods based on either the government-model or the social movement(JOAA)-model.

According to the table 3, the government' standard does not include labor condition, human right, restructuring of society or *teikei*. In this sense, it can be said that the government's standard is much more simple than that of JOAA. This is appropriation and simplification of what *yukei* means in Japanese social movement's context. It can also be understood as commodification of organic food in Japan.

3.4 Structure of organic food chain in Japan

This section shows structure of upstream and downstream of organic food chain in Japan. This research observes influence of the public organic agriculture policy, especially national organic agriculture standard and certification. Thus Japanese organic food chain and actors in there are explained and analyzed based on certified by the national certification or not.

Upstream of the chain

This section explains structure of upstream of organic food chain in Japan. There are four sub-sections: 1, scale of firm; 2, input practice of farmers; 3, different variation of products between certified and non-certified farmers; 4, agri-input businesses. Section 1, 2 and 3 are described in the way of comparison between organic farmers who are certified by national organic food certification and those who are not. These four dimensions of upstream of organic food chain fit with "dimensions of conventionalization" described in theoretical framework chapter.

Scale of firm

MOA nature farming cultural enterprise conducted research of organic farmers in Japan and estimated acreage not certified by organic JAS by choosing 200 villages or cities from whole area in Japan in 2010(Kuwamura 2011). However, it should be noted that findings of upstream and downstream of the organic food chain mostly centers on certified organic food due to limitation of data about non-certified organic farmers and foods. The report written by Kawamura and published by MOA is only one data which show information of non-certified organic farming. Update of data or similar data were not available from other sources. Thus, although an analysis of the organic food chain that comes later chapter uses

data which are acquired from the report as representative of non-certified organic food sector, it does not surely represent current situation.

According to the report, acreage of certified land is 9,067 ha in 2010, and that of non-certified land is 7,300 ha in 2013. MOA also estimated the number of non-certified organic farmers. In 2010, there were 3815 JAS organic farmers and 7,865 non-certified farmers. Non-certified acreage is smaller than certified one while the number of non-certified farmers were bigger than that of certified farmers. Table 4 shows acreage of certified and non-certified organic farmers.

Table 4
Acreage of certified and non-certified organic farmer

Acreage of certified and non-certified organic farmer		
	Certified organic farmer	Non-certified organic farmer
Population	3,815	7,865
Acreage(ha)	9,067	7,300
Average of acreage per one farmer(ha)	2.38	0.93

Source: edited by the author of this paper based on Kuwamura(2011)

Average acreage of certified farmers is 2.38 ha while that of non-certified farmers is 0.93 ha. It means that scale of certified organic farmers are larger than that of non-certified farmers.

Input practice of farmers

MAFF reports that though rice straw which is used as fertilizer is completely(100 %) self-produced by farmers, 34.6% of manure and 80.4 % of other organic material are self-produce per 10a of each certified organic farmers(MAFF 2011). This indicates that, at least, certified organic farmers tend to get organic manures from off-farm actors. Besides, the amount of these fertilizers per 10a are: rice straw is 373 kg, manure is 671 kg and other inputs are 139 kg. This means that manure is the most used fertilizer by certified organic farmers. Hence, it is inferred that organic farmers who are certified by organic JAS get fertilizer mostly through off farm sources.

What to produce of organic food producers

This section explains how variation of organic foods produced is different between certified and non-certified organic farmers⁶. Table 5 is the estimated amount of organic products

⁶ In the table I made Based on Kuwamura (2011), non-certified organic farmers are defined as farmers who satisfy following conditions: 1, not using chemical inputs; 2, using organic inputs which are decided by national organic food standard(this does not mean they should be certified by national certification); 3, farmers who won more than 10a of acreage and earn more than 150,000 yen in agriculture; 4, farmers who sell organic foods in this 1 year; 5, production cite is natural land. In this research, category of 'non-certified organic farmers' which is used in later chapters refers to this definition. However, it should be noted that some people criticizes national organic food standard in that it bans to use organic inputs which is not problematic. Thus, there should be farmers were not counted as 'non-certified organic farmer' in the report despite they practice organic farming.

which was shipped out in 2009 by both type of organic farmers based on Kuwamura (2011). It consists of vegetable, fruits, rice, wheat, soy bean, green tea and other crops(Ibid.: 16). This data is old; thus, it should be noted that current situation of the contents might be different.

Table 5

The amount of organic foods shipped in Japan in 2009(ton)

The amount of organic foods shipped in Japan in 2009(ton)			
	Certified organic foods	Non-certified organic foods	Total
Vegetable	37,644	25,000	62,644
Fruits	2,436	1,200	3,636
Rice	11,565	14,000	25,565
Wheat	782	260	1,042
Soybean	939	230	1,169
Green tea	1,873	120	1,993
Others	2,103	3,400	5,503
Total	57,342	44,000	101,552

Source: Kuwamura(2011)

The amount of certified products by organic JAS was 57,342 ton, and that of non-certified one was 44,000 ton as a total(Difference is 130%). Although total amount of certified organic products were more than that of non-certified one, some foods were shipped out more by non-certified organic farmers than certified organic farmers. Rice and ‘other crops’ were produced by non-certified farmers more than certified farmers, but the difference(non-certified rice is 121% of certified products) is less than other products. For example, the amount of certified vegetable is 150%, fruits is 203%, wheat is 300%, soy bean is 408%, and green tea is 1560% of that of non-certified products. Even differences are huge especially in wheat, soy bean and green tea, but the amount itself of these products are smaller than that of rice and vegetable. Hence, the difference of total amount of crops were not so huge(130%). In sum, at least in domestic level, total amount of certified products were slightly bigger than that of non-certified products, although non-certified products were produced more in some products.

Agri-input businesses

According to Evaluating association of organic agriculture inputs (2018), material evaluating association, there are 501 companies which register organic fertilizer or pesticides based on JAS standards as of 29 August 2018. According to JOAA (2011) and interview for an director of organic farmers’ association in Shimane prefecture, most of JAS certified farmers purchase these kinds of inputs from outside of own firms. Beside, a director of JOAA who was interviewed by the author of this paper said that scandal of one agri-input businesses in Akita prefecture, which sold fake organic inputs produced by mixing chemical inputs and organic materials, revealed the fact that a number of organic farmers certified by organic JAS relied on purchased organic inputs. Moreover, a local government’s officer of Akita prefecture who was interviewed by the author of this paper said that one of some factor of decreasing number of certified organic farmers and acreage in the prefecture was the scandal of the agri-business. This also indicates how off-farm organic agri-input is widely used among certified organic farmers. In addition to this, the previous section of “input practice” above

explains reliance of the farmers on the off-farm inputs. As a conclusion, it can be said that domestic agri-input businesses has certain level of market in organic food chain in Japan.

Downstream of the chain: Share and the amount of domestically produced, imported and exported organic foods, which are certified by Japanese organic food certification

This section explains current structure of downstream of organic food chain in Japan. This structural situation of Japanese organic food market is related to organic agriculture policy by the Japanese government. This relation is main focus of next chapter. This structural situation of downstream of organic food chain fit with “dimensions of conventionalization” that is showed in theoretical framework chapter.

Since the legislation of the national organic food standard and certification in 2000, organic food producers, who get Japanese organic food certification in foreign countries and produce organic foods there⁷, has joined to Japanese organic food market. Current structure of the market is featured by complex interaction of domestic and foreign actors. This section shows how much certified organic foods were domestically produced, imported from and exported to foreign countries from 2011 to 2016 based on statistics which are published by MAFF. At first, the share of imported organic foods are explained. Then that of exported organic foods are shown. Data of non-certified organic foods were not found except those of 2009 collected by MOA. Thus, the share of non-certified organic farmers are inferred based on the data. This data is not new, so the inference may be different from current situation of these farmers.

Table 6 shows how much certified organic foods are produced domestically, imported and exported. The amounts do not include those of non-certified organic foods. Besides, the amounts are sum of processed and non-processed organic foods. Relationship among these three categories of organic foods are cited in following paragraphs.

⁷ In this research, these producers are regarded as non-Japanese. However, it is possible that there are Japanese producers who get certification in foreign countries and produce there, or non-Japanese people who produce organic foods in own country under supervision of Japanese food company. However, this research could not find data or evidences which prove existence of these people.

Table 6

The amount of imported and exported certified organic foods comparing to domestically produced certified organic foods in Japanese organic foods market

The amount of imported and exported organic foods comparing to domestically produced certified organic foods in Japanese organic foods market*1							
	2010	2011	2012	2013	2014	2015	2016
1 The amount of domestically produced certified organic foods*2	155065	149096	147369	143390	149187	128565	146539
2 The amount of imported organic foods*3	no data	117986	96793	118178	94717	93598	75339
3 The amount of exported organic foods to countries where have equivalent organic food regulation with Japan(North American and EU countries)	39.415	187.647	141.926	214.96	399.223	729.112	973.681
4 Share of imported organic foods (=2/{1+2})	no data	44.2%	39.6%	45.2%	38.8%	42.1%	34.0%
5 Share of exported organic foods(=3/1)	0.03%	0.13%	0.10%	0.15%	0.27%	0.57%	0.66%

Source: edited by the author of this paper based on MAFF(2011-2016)

About relationship between domestically produced and imported organic foods, the amount of both foods had decreased from 2011 to 2016. However, a width of decrease in the amount of imported one was bigger than that of domestically produced one. Thus, share of imported organic foods in the domestic organic foods market decreased in the period. As for relationship between domestically produced organic foods and exported ones, the amount of exported ones had increased dramatically since 2011 to 2016. Thus, share of exported organic foods in the domestic organic foods market also had increased. This means more and more domestically produced organic foods had been distributed not within domestically but for foreign countries. As a result, domination of imported organic foods in domestic organic foods market, which is what Sugihara(2006) concerned, had been reversed. Rather, increasing share of exported organic foods in domestically produced organic foods is noticeable and emerging phenomenon in current Japanese organic food sector.

The amount of the foods in previous section is sum of processed and non-processed foods. As a next step, this production and distribution structure of Japanese organic food sector is analyzed based on a variety of organic foods. At first, the structure of non-processed organic foods is explained. That of processed organic foods comes next. The amounts do not include those of non-certified organic foods same as the previous section.

Tables 7, 8, 9, and 10 show how much non-processed organic foods had been domestically produced, imported and exported to foreign countries. The foreign countries are North American and EU countries same as previous section. As for the amount of exported foods, only the data of 2015 and 2016 was available from statistics of the government. Besides, detail of the foods was not available. Choice of foods in the table followed what MAFF(2011-2016) report in its statistics. Besides, green tea is regarded as tea before processed. "Tea" in table 13 is considered as tea after processed.

Table 7

Comparison of the amount of organic foods certified in Japan and foreign countries(ton)

Comparison of the amount of non-processed organic foods certified in Japan and foreign countries(imported food)(ton)						
Year	2011		2016		Increase rate of the amount from 2011 to 2016	
Category of organic foods	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan
Vegetable	40288	19886	39209	1448	-2.7%	-92.7%
Fruits	2275	13064	2619	10669	15.1%	-18.3%
Rice	10028	587	9250	1358	-7.8%	131.3%
Wheat	1069	905	938	1791	-12.3%	97.9%
Soybean	1132	27248	945	8098	-16.5%	-70.3%
Green tea	1986	0	3533	12	77.9%	0.0%
Coffee	0	2638	0	1695	0.0%	-35.7%
Others	1666	4413	826	635	-50.4%	-85.6%
Total	58444	68741	59955	32858	2.6%	-52.2%

Source: edited by the author of this paper based on MAFF(2011-2016)

Table 8

Comparison of the amount of organic foods certified in Japan and foreign countries(%)

Comparison of the amount of non-processed organic foods certified in Japan and foreign countries(imported food)(%)						
Year	2011		2016		Increase rate of the amount from 2011 to 2016	
Category of organic foods	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan
Vegetable	67.0%	33.0%	96.40%	3.60%	44.0%	-89.1%
Fruits	14.8%	85.2%	19.70%	80.30%	32.8%	-5.7%
Rice	94.5%	5.5%	87.20%	12.80%	-7.7%	131.5%
Wheat	54.2%	45.8%	34.40%	65.60%	-36.5%	43.1%
Soybean	4.0%	96.0%	10.50%	89.50%	163.2%	-6.8%
Green tea	100.0%	0.0%	99.70%	0.30%	-0.3%	0.0%
Coffee	0.0%	100.0%	0	100%	0.0%	0.0%
Others	27.4%	72.6%	56.50%	43.50%	106.2%	-40.1%
Total	46.0%	54.0%	64.60%	35.40%	40.6%	-34.5%

Source: edited by the author of this paper based on MAFF(2011-2016)

Table 9

Comparison of the amount of non-processed organic foods certified in Japan and foreign countries(exported foods)(kg)

Comparison of the amount of non-processed organic foods certified in Japan and foreign countries(exported food)(kg)						
Year	2015		2016		Increase of the rate	
Category of organic foods	certified in Japan	Certified in Japan, then exported to foreign countries	certified in Japan	Certified in Japan, then exported to foreign countries	certified in Japan	Certified in Japan, then exported to foreign countries
Total	60684	2.526	59955	3.4	-1.2%	34.6%

Source: edited by the author of this paper based on MAFF(2010-2016)

Table 10

Comparison of the amount of non-processed organic foods certified in Japan and foreign countries(exported foods)(kg)

Comparison of the amount of non-processed organic foods certified in Japan and foreign countries(exported food)(%)						
Year	2015		2016		Increase of the rate	
Category of organic foods	certified in Japan	Certified in Japan, then exported to foreign countries	certified in Japan	Certified in Japan, then exported to foreign countries	certified in Japan	Certified in Japan, then exported to foreign countries
Total	99.996%	0.004%	99.994%	0.006%	-0.002%	36.2%

Source: edited by the author of this paper based on MAFF(2010-2016)

As for imported foods, total amount of non-processed foods had decreased 52.2 % from 2011 to 2016 based on table 7. This is because of 92.7 % and 70.3 % decrease in the amount of vegetable and soybean. On the contrary, the amount of rice and wheat had increased 131.3 and 97.9% each in the period. As for relative share of imported and domestically produced non-certified organic foods, most of vegetable, rice and green tea were produced domestically(96.4, 87.2 and 99.7 % each) while most of fruits, wheat, soy bean and coffee were imported(80.3, 65.6, 89.5 and 100% each) in 2016 according to table 8. Table 9 and 10 show the amount of exported foods. The amount had increased from 2015 to 2016, but it was only 0.006 % of the total amount of non-processed organic foods that was produced in Japan in the period.

Next tables 11, 12 and 13 show the amount of domestically produced, imported and exported processed organic foods. As for the amount of exported foods, enough data before 2014 was not available; thus, the table shows data of 2014, 2015 and 2016. Variety of the foods in the table was chosen based on the author's choice.

Table 11

Comparison of the amount of processed organic foods certified in Japan and foreign countries(imported foods)(ton)

Comparison of the amount of processed organic foods certified in Japan and foreign countries(imported food)(ton)						
Year	2011		2016		Increase rate of the amounts	
Category of organic foods	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan
Processed vegetable	4432	29187	6357	17426	43.4%	-40.3%
Processed fruits	2198	3933	2791	4065	27.0%	3.4%
Processed soybean	63065	1680	46523	1274	-26.2%	-24.2%
Others	20957	14715	30913	19779	47.5%	34.4%
Total	90652	49515	86584	42544	-4.5%	-14.1%

Source: edited by the author of this paper based on MAFF(2011-2016)

Table 12

Comparison of the amount of processed organic foods certified in Japan and foreign countries(imported foods)(ton)

Comparison of the amount of processed organic foods certified in Japan and foreign countries(imported food)(%)						
Year	2011		2016		Increase rate of the shares	
	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan	certified in Japan	Certified in foreign countries, then exported to Japan
Processed vegetable	13.2%	86.8%	26.7%	73.3%	102.8%	-15.6%
Processed fruits	35.9%	64.1%	40.7%	59.3%	13.6%	-7.6%
Processed soybean	97.4%	2.6%	97.3%	2.7%	-0.1%	2.7%
Others	58.7%	41.3%	61.0%	39.0%	3.8%	-5.4%
Total	64.7%	35.3%	67.1%	32.9%	3.7%	-6.7%

Source: edited by the author of this paper based on MAFF(2011-2016)

Table 13

The amount and share of exported certified organic foods comparing to that of the domestically produced certified organic foods

	2014			2015			2016			Increase of the amount		
	Domestically produced	Exported	Share of exported foods	Domestically produced	Exported	Share of exported foods	Domestically produced	Exported	Share of exported foods	Domestically produced	Exported	Share of exported foods
Tea	83600	296.832	0.35%	76400	457.974	0.60%	77100	609.651	0.78%	-7.8%	105.4%	121.7%
Konjac	1480	27.033	1.79%	1671	28	1.65%	1504	52.991	3.40%	1.6%	96.0%	89.7%
Processed soybean	53587	26.895	0.05%	39993	96.642	0.24%	46523	153.384	0.34%	-13.2%	492.6%	580.6%
Processed plum	n	7.781	n	n	24.749	n	n	44.957	n	n	477.8%	n
Processed vegetable	5703	n	n	4937	2.37	0.06%	6537	1.495	0.02%	14.6%	n	n
Others processed foods	4817	41	0.84%	5564	144	2.51%	14875	150	1.00%	208.8%	269.1%	19.3%
Total	149187	399.223	0.27%	128565	729.112	0.56%	146539	973.681	0.66%	-1.8%	143.9%	147.3%

Source: edited by the author of this paper based on MAFF(2010-2016)

As for the amount of processed organic foods which were imported from foreign countries, total amount of the domestically produces foods had decreased and that of imported one had increased from 2011 to 2016. However, width of the increase was not so huge that it changed a whole dynamic: more amount of domestically processed organic foods than that of imported one. In terms of a variety of foods, almost processed soy bean had been produced within Japan while most of processed fruits and vegetable had been imported in the period. Even though production of processed fruits and vegetable had relied on foreign organic food producers, share of the domestic products had increased.

The amount of processed organic foods which are exported had increased 143% in 3 years.

Especially, that of processed soybean and tea show dramatical increase in the period. However, share of the amount of these exported commodities in whole domestically produced and processed organic foods was small: tea was 0.78%, konjac was 3.4 %, and processed soybean was 0.34% in 2016. Thus, it can be said that most of processed organic foods are consumed domestically even though some products are getting exported.

In sum, it is found that each variety of both non-processed and processed organic foods has orientation toward more domestically produced, imported or exported; besides the orientation as an organic foods as a whole which is shown in table 7. Organic foods as a whole,

share of the domestically produced organic foods had reversed the share of imported organic foods from 2011 to 2016. Besides, share of the exported organic foods had increased in the period. In terms of variety of the foods, share of the domestically produced and non-processed food had increased due to decrease amount of the imported one. Increasing amount of organic soybean also had supported the increase of domestic products. Even if most of rice was produced domestically, the amount and share of imported one had increased. The amount of exported and non-processed organic foods also had increased, but share of the amount in whole non-certified organic foods were so small. Thus, orientation toward domestically produced, imported or exported based on a variety of non-processed organic foods is following. Most of vegetable and rice are produced and consumed domestically. It means these two commodities' production and distribution channels are domestic-oriented. Almost all green tea is produced domestically, but the production can be for export due to increasing amount of organic tea as processed food in table 13. On the contrary, most of soybean and fruits production rely on foreign organic food producers. Even though the amount of exported non-processed organic foods had increased in 2015 and 2016, the amount had been small. Thus, most of domestically produced foods are distributed within Japan. Beside, these orientation seem to reflect Japanese consumer demands. According to Yoshino(2011, 2012)⁸, a variety of non-processed organic foods which Japanese consumers buy the most is vegetable, rice and fruits. Increasing amount of domestically produced organic vegetable and fruits seem to be led by the consumer preference.

In terms of non-processed organic foods, except increase of the amount of domestically processed vegetable, there had not happened noticeable change in relationship between the amount and share of domestically and imported processed organic foods from 2011 to 2016. Production of processed vegetable had relied on import in 2011, but its amount and share increased in 2016. This seems to reflect increase of non-processed vegetable in same period in table 7. Most of processed soybean products had been produced within Japan. According to Ogawa et al.(2007), most of imported organic soybean was processed to organic processed soybean products such as soy sauce or tofu by domestic organic processors(2007: 107-108). As for export, the amount and share of export in some products had increased dramatically even within 3 years: from 2014 to 2016. The products are tea, processed soybean and processed plum. According to Yoshino(2011, 2012), a variety of processed foods which is bought by Japanese consumer the most is processed soybean products. This indicates that imported organic soybean(non-processed) is converted into soy sauce or tofu by domestic organic food processors, then distributed both domestically and to North American and Eu countries where consumer demands for the products are high.

⁸ These reports are survey about Japanese consumers' perception for organic farming and organic food label, and their purchasing behavior on organic foods. Both survey were conducted by the same author in different years. The author adopted internet questionnaire by collecting more than 2000 samples which cover almost all generations, income and residence of Japanese people(2011: 2-3, 2012: 2-4). It can be said that author tried to increase accuracy of survey as much as possible.

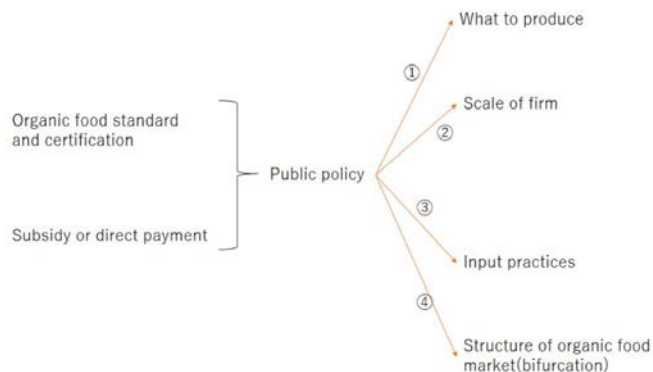
Chapter 4 Analysis chapter: Influence of the public policies on the Japanese organic agriculture sector & conventionalization

4.1 How institutional factor influences on structure of current Japanese organic sector

This section analyzes how public policies explained above influences on structure of current Japanese organic sector. Figure 2 explains how this research analyzes structure of Japanese organic agriculture industry.

Figure 2

Frame work of analysis



Source: made by the author of this paper

Japanese government's organic agriculture policies influence on four dimensions of the current structure of organic agriculture industry in Japan: 1, scale of firm; 2, input practice of producers; 3, marketing practices of producers, retailers, processors and exporters; 4, structure of organic food market.

Scale of firm

National organic certification made division of scale between large scale and small scale farmers. As showed in finding chapter, average acreage of organic farmers who are certified

by national organic certification is larger than that of non-certified farmers. Possible reason of this division is time and monetary cost to get the certification. As mentioned in previous chapter, it is cost demanding for small scale farmers to do that. On the contrary, large scale producers or farmers' organization can afford it easier. Thus, it can be said that these costs along with the national organic agriculture certification make the binary related to the certification among organic food producers: one is certified and large scale farmers or producers, and another is non-certified and small scale farmers.

Input practice of producers

National organic standard and certification causes input substitution, especially among organic farmers who are certified by national organic food certification. As mentioned in finding chapter, 34.6% of all certified organic farmers provide organic manure by themselves. It means that 65.4 % of the farmers get organic manure from outside of farm. These evidences show that input substitution occurs mainly among certified organic farmers.

Structure of organic food market: food and agri-input distribution channel

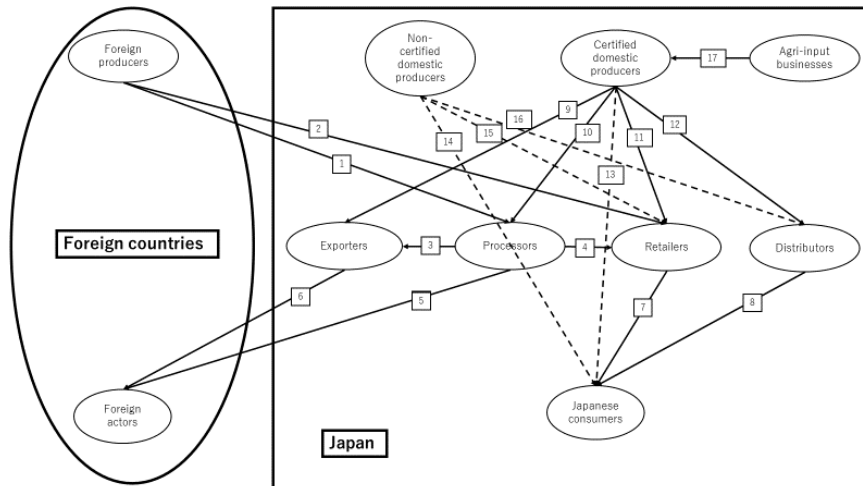
Based on chapter 3, national organic food standard and certification opened new flow of organic foods and agri-organic inputs distribution channel in Japanese organic foods market. These new flows have relation with "what kinds of organic foods producers, processors, retailers and exporters produce and sell" that is analyzed in section 3. Firstly, detail of the new flows are explained. Secondly, relation between the flows and variety of organic foods which producers, processors, distributors, retailers and exporters produce and sell is explained.

The figure below shows the flows visually⁹. Arrows with strait line are the new flows opened by Japan organic agriculture standard and certification, and require to be certified by the certification to join into it. These flows are called 'the new flows' in this paper. Arrows with dotted line are flows which does not require the certification or exist since before legislation of the standard and certification. These flows are called ' the conventional flows' in this paper.

⁹ It should be mentioned that the flows of organic foods and agri-inputs in this paper is just a small part of whole organic food chain in Japan. The flows introduced in this paper is what the author found out in the research.

Figure 3

Distribution channels of certified and non-certified organic foods, and agri-inputs



Source: made by the author of this paper

Detailed explanation of these flows are below:

- ① Flow of certified organic foods from foreign organic food producers to Japanese organic food processors
- ② Flow of certified organic foods from foreign organic food producers to Japanese food retailers
- ③ Flow of certified organic foods from domestic organic food processors to exporters
- ④ Flow of certified organic foods from domestic organic food processors to retailers
- ⑤ Flow of certified organic foods from domestic organic food processors to exporters
- ⑥ Flow of certified organic foods from domestic organic food exporters to foreign countries
- ⑦ Flow of certified organic foods from domestic food retailers to domestic consumers
- ⑧ Flow of certified organic foods from domestic food distributors to domestic consumers
- ⑨ Flow of certified organic foods from domestic certified organic food producers to exporters
- ⑩ Flow of certified organic foods from domestic certified organic food producers to processors
- ⑪ Flow of certified organic foods from domestic certified organic food producers to retailers
- ⑫ Flow of certified organic foods from domestic certified organic food producers to distributors
- ⑬ Flow of certified or non-certified organic foods from domestic certified organic food producers to domestic consumers (direct trade)
- ⑭ Flow of non-certified organic foods from domestic non-certified organic food producers to domestic consumers

⑮ Flow of non-certified organic foods from domestic non-certified organic food producers to domestic food retailers

⑯ Flow of non-certified organic foods from domestic non-certified organic food producers to domestic food distributors

⑰ Flow of agri-organic inputs from domestic agri-input businesses to domestic certified organic food producers

These new flows indicate two things. First, organic food industry has been incorporated into international organic food market and relationship with foreign actors. Second, these new flows are available for actors who get national organic food certification.

Organic foods production and distribution channels based on variety of the foods

Then, a variety of organic foods which producers, processors, distributors, retailers and exporters produce and sell that is explained in chapter 3 is combined with the flows. There exist a variety of organic foods in Japan, but this research picked up organic vegetable, rice, fruits, tea and processed soybean products as analytical target. This is because that vegetable, rice, fruits and processed soybean organic foods are consumed the most among all kinds of organic foods within Japan by Japanese consumers (Yoshino 2011: , 2012:). As for tea, it is added because the amount of processed organic tea which is exported had been increased dramatically; thus, the products seem to important commodity in Japanese organic food market. Besides, the available data of a variety of organic foods produced by certified and non-certified domestic organic food producers (table 5) show the amount of vegetable, fruits, rice, and non-processed green tea; hence, it is necessary to pick up these variety of organic foods in analysis of this chapter. Table 14 shows relation of the flows which are explained above and variety of organic foods.

Table 14

Relation between the flows and variety of organic foods produced and distributed in Japan

Relation between the flows and variety of organic foods produced and distributed in Japan	
Variety of the foods	The number of the flows
Vegetables and rice as a majority	9,11,12,13,14,15,16
Processed foods (mainly soybean products) and fruits as a majority	1,2,3,4,5,6,7, 10
Processes and non-processed green tea	3,5,6,7,8,9,10,14,15,16
Cannot be classified correctly because of limitation of data	8

Source: made by the author of this paper

According to figure 3, table 7 and 8, it can be said that most of organic fruits and processed soybean products are produced and distributed on the new flows of organic foods opened by national organic foods standard and certification. This is because that most of these two products from 2011 to 2016 were imported. However, most of organic vegetable and rice are produced and distributed within Japan based on figure 3, table 7 and 8. Besides, distribution channel of vegetable and rice are mixture of the new and conventional flows. Organic vegetable is produced by both certified and non-certified organic food producers, then distributed via both local and wider scale channels. The local food distribution channel consists of direct food trade from producers to consumers which do not require food certification. On the contrary, wider scale distribution channels demand the certification. As for

tea which includes both processed and non-processed green tea, most of the amount is produced within Japan according to table 7 and 8. Besides, table 5 tells that most of non-processed green tea is produced by domestic certified producers. It can be said that almost non-processed green tea produced by the producers are sent to domestic organic food processors, then are shipped to domestic distribution channels and North American and EU countries. Based on table 5, most of organic tea is produced and distributed via the new flows of organic foods production and distribution in figure 3.

Influence of public policy on organic food production and distribution channel

This differentiation of variety of organic foods which are produced and distributed based on distribution channel can be understood as the result of the government's influence on each actor's production and marketing strategy based on following reasons. Firstly, in the government organic agriculture policy, export of organic foods are promoted as cited in chapter 3. The government provides financial support for food retailers, processors or exporters to get national organic food certification or to export organic foods. This can be one of the incentive for these actors. Secondly, the amount of exported organic foods(tea, processed plum and konjac) to North American and EU countries had expanded from 2014 to 2016 based on table 13. As for producers, government policy can be understood as one of the factor which shapes what they produce. As shown in table 7, the amount of green tea which produced domestically had increased from 2011 to 2016. Besides, most of the tea should be produced by domestic certified organic farmers according to table 5. Besides, the national organic standard and certification might affect non-certified farmers production strategy as well. As these farmers cannot label their product as 'organic' or '*yukk?*', their marketing channels might be limited comparing to those of certified organic farmers. This also can restrict what non-certified organic producers can produce. These evidences show that government organic agriculture policies may affect production and distribution strategy of certified organic food producers, processors, retailers or exporters.

However, this analysis shows only abstract picture of organic food chain in Japan. Thus, following points should be noted. These points should be deepened in future researches. Firstly, it is highly possible that there exist retailers or distributors who specialize in domestic organic foods marketing, but this research could not get the data about them due to time constraint. Secondly, power of non-state actors should be taken into account into analysis of organic food chain in Japan. According to Tsutaya(2002), national scale organic agriculture development can be classified into state-driven model or market-driven model(2002: 25). Organic agriculture development in EU, Switzerland and Korea is led by state's policy and legal system which decides to promote organic agriculture while United States are led by market, such as power of retailers or distributors(Ibid.: 25). In this research, Japanese case seems to be mixture of market-driven model and state-led model. Before legislation of national organic food standard and certification, organic food chain had expanded without state's intervention. After the legislation, organic food chain became mixture of domestic and international trade, and a number of new distribution channels were opened. However, other literature mentions strong power of non-state actors in production level of the chain. Hamamura(2012) points out conventional vegetable farmers' production strategy in Japan is strongly affected by retailers or distributors; and this tendency is reproduced at least in Hokkaido prefecture where produces certified organic foods the most in Japan(2012: 17-18). Besides, Ikegami(2014) states supermarkets have influence on production level(2014: 4). This research could not include influence of non-state actors as the factors which amend which amend form of production and distribution of organic foods in Japan; hence future re-

searches are suggested to investigate this different degree of actors' power in Japanese organic food chain. This research may deepen not only organic agriculture research in Japan but also conventionalization debate by identifying which factors are influential in each region's organic agriculture development.

4.2 Structure of food market: What organic producers, processors, retailers and exporters produce and sell

Government's organic agriculture policy may affect what organic food producers, processors, retailers and exporters produce and sell. In the government organic agriculture policy, export of organic foods are promoted. The government provides financial support for food retailers, processors or exporters to get national organic food certification or to export organic foods. This can be one of the incentive for these actors. Actually, the amount of exported organic foods, which are tea, processed plum and konjac, to EU had expanded from 2014 to 2016. As for producers, government policy can be understood as one of the factor which shapes what they produce. As shown in chapter 3, certified organic farmers produce much more amount of green tea than non-certified organic farmers. These findings show the government's policy to promote organic foods export affects certified organic farmers, exporters, retailers and exporters' production and marketing strategy. Besides, national organic standard and certification might affect non-certified farmers production strategy as well. As these farmers cannot label their product as 'organic' or '*yuki?*', their marketing channels might be limited comparing to those of certified organic farmers. This also can restrict what non-certified organic producers can produce.

4.3 Whose interests are promoted and protected

As analyzed in chapter 4.1, national organic food standard and certification opened new flows of organic foods and agri-inputs. These new flows are available only for actors who get the certification. Organic food producers who do not or cannot afford it are excluded from the flows. Thus, it seems that the national organic food standard and certification promotes and protects interests of certain actors: agri-input businesses, domestic certified organic food producers, foreign organic food producers, domestic food processors, retailers, distributors and exporters. On the flipside, non-certified organic food producers were taken over their right to use the term '*yuki?*' and 'organic' as label on their products and join into certain organic distribution channel. This is exclusion of non-certified producers from '*yuki?*' foods market by converting what '*yuki?*' means. The meaning was converted from context of social movement to that of international standard as shown in chapter 3. Background of the standard and certification legislation shows how this political relation of interest was made. From the beginning, making of national organic food standard and certification in Japan was aimed to regulate organic food market to respond to domestic fake organic food scandal and pressure from WTO. It can be said that primary purpose of the standard and certification was not to benefit domestic organic food producers but Japanese consumers and foreign organic food producers who sought new organic food market. In the process of standard making, social movements' criticism for making of national organic food standard was ignored. Besides, organic farmers or member of social movements could not join this making process. In the end, the standard and certification build up structure in organic food production and distribution channel where actors who can have benefit are selected and certain actors are excluded.

Non-certified organic farmers are taken over their right to use *yuki*. However, this does not necessarily mean they are marginalized to less profitable market than certified organic foods market as the bifurcation theory assumes based on following two reasons. First, while organic fruits and processed soybean products are mainly produced and distributed via the distribution channels of organic foods which are only available for actors who have certification, more than half of these products were produced by non-certified producers in 2009 based on table 5. Even the amount of vegetable produced by the producers were 39.9 %. This research does not compare profitability of certified and non-certified organic foods market, so it is possible that domestic market of organic vegetable and rice are less profitable. If so, non-certified organic food producers are marginalized economically as well. This point should be investigated in future researches. Secondly, in addition to existing share for the non-certified producers, stagnation of retailers' joining into organic food chain can be another reason of non-marginalization of the farmers. According to the officer of MAFF and Ogawa et al.(2007), Japanese organic farmers are small scale and dispersed. Thus, it is cost-demanding and unstable marketing for food retailers and processors to buy small lot of organic foods from each of the farmers. The officer articulated stagnation of scale expansion of Japanese organic food market to this condition . These evidences indicate possibility of thriving non-certified small scale farmers in local food market. However, Ikegami(2014) and Hamamura(2012) stated increasing influence of food retailers on production scheme of organic food producers. Besides, Ogawa et al.(2007) introduces some cases of mass-food retailers' joining into organic food production by contract farming with organic farmers. To what extent food retailers join into and affect on upstream of the chain also should be focus of future research. As a conclusion, non-certified organic producers may not necessarily be marginalized at least economically because they seem to survive in market of organic vegetable and rice which are mainly produced and distributed within Japan; even though penetration of capital discourse is proceeding in both upstream and downstream of organic food chain in Japan.

4.4 To what extent conventionalization proceeds in Japan?

This research observed signs of conventionalization in both upstream and downstream of organic food chain. An important factor of this capital penetration into Japanese organic agriculture sector is public policies by the Japanese government. Especially, legislation of the national organic agriculture standard and certification leads the phenomenon. The way the standard and certification brought the discourse into the Japanese organic food chain provides important implication for future researches. Besides, non-certified actors are not necessarily marginalized. This section explain the signs of the conventionalization in upstream and downstream of the chain first, then states implication for future researches.

Signs of the conventionalization in the Japanese organic food chain

In Japan, some parts of organic food chain has been penetrated by production and distribution scheme which are oriented on logic of capital since legislation of national organic food standard and certification. In upstream of organic food chain, agri-input businesses provide off-farm organic inputs to organic farmers based on chapter 3 and 4. Besides, not small number of certified organic farmers rely on the inputs. This indicates progress of input-substitution in the upstream. With regard to scale of farm, distinction of farm scale between certified and non-certified organic farmers is observed: the former is larger than latter. This binary between larger/certified farm and smaller/non-certified farm is what prior conventionalization debates raised as indicator of the phenomenon.

In downstream, new flows of organic foods and agri-inputs was opened by the standard and certification, which are available only for certified actors according to chapter 4. These flows are oriented not to Japanese social movement's organic farming principle but to logic of capital due to following reasons. Firstly, these flows are organized by Japanese organic food standard and certification that was based on international standard. Both standard do not mention transformation of social structure distorted by modernization of agriculture but only technical criteria of organic food production and ecological concern in food production. Thus, the flows are organized in appropriated organic food production scheme. Secondly, geographical scale of these flows are national and international scale. Thirdly, JOAA opposed to legislation of the standard and certification in 1980s and 1990s when Japanese government made it. This collision can be understood as the social movement's organic farming ideology and international organic food standard. In flows of organic foods and agri-inputs opened by national organic food standard and certification, organic foods are just commodity which is same as conventional foods and is source of profit produced in food trade. These evidences indicate progressing capital penetration into Japanese organic food chain caused by the standard and certification; and, unequal relationship related to production and distribution of organic foods between certified actors and non-certified farmers. However, it does not necessarily mean non-certified organic farmers are marginalized economically as conventionalization and bifurcation theories assume, because these farmers seem to survive in certain variety of organic foods market as explained in chapter 4.2.

Suggestion for future researches

This research suggests to adopt a power of the international organic agriculture standard into future study of organic agriculture development in the Global North. The subordination and appropriation of local or regional 'organic' farming discourse by the international organic food standard was already discussed in researches in the Global South. As Vandergeest(2009), Makita(2012) and Scott et al. (2009) claimed, the Global North's imposition of organic food production discourse in the form of organic food certification change local organic food production scheme in the Global South to that of Global North. In this process, the scheme is converted from ideology-oriented to market-oriented. The Global North's standard is imposed in the form of a rural development project by donor agencies, state or NGOs. It is also explained as involvement of developing countries' farmers into conventionalization of developed countries. In Japanese case, situation is similar in that international organic food standard penetrates some parts of organic food chain. What the Japanese term '*yukiz*' means is appropriated and subordinated by the national organic food standard and certification that is based on the international standard that has its root in European organic farming production scheme. This transition of the ideology causes marginalization of non-certified and domestic organic farmers from '*yukiz*' food market. However, it is understood not as collision between the Global North and South but among the Global North: western countries(United States and Europe)¹⁰ vs. Japan(or Asia). In other words, there exists the another form of politics that is related to cultural aspect of organic food and agriculture within the Global North that is perceived as dominator in the politics of organic food standard and certification. Hence, this research provides new perspective on study of organic agriculture development, conventionalization and international politics of organic food standard and certification.

¹⁰ It should be noted that even among Europe, organic farming discourse is different and unique in each country. This can be inferred from Visser(2015).

Chapter 5 Preliminary Conclusion

This research investigates Japanese organic agriculture sector through a lens of conventionalization and bifurcation theories. Some of dimensions of and factors which shape form of the conventionalization and bifurcation are employed as the analytical framework to do that. The dimensions are scale of farm, production, input and marketing practices of farmers, structure of organic foods market which are parts of upstream and downstream of the Japanese organic food chain. The factor is public policies of Japanese government. In this research, transition of the sector since legislation of the national organic food standard and certification is investigated. As a result, it is found that there existed international politics of organic food standard and certification in international policy arena on the back of transition. This politics is huge influence of western-Europe organic agriculture discourse in the international standard and certification. The politics of organic food standard and certification appropriated the meaning of '*yukei*' into its discourse; then, built up international scale organic foods production and distribution channels which are organized by the international standard discourse that does not include ideologies of Japanese organic farming social movements. This is understood as subordination and appropriation of the word '*yukei*'. This international politics is observed in other literatures about organic agriculture development in developing countries. However, this research provides strong influence of western Europe organic agriculture discourse even among developed countries. In other words, this research shows new perspective on the politics: not only Global North vs. South but also political relation among Global North.

This research also suggest for public policy of Japanese organic agriculture development. The policy should include ideology of social movements' organic farming ideology by supporting direct relationship between organic farmers and consumers. Eden states that there is dilemma in organic food certification: provision of more organic foods by sacrificing organic farming ideology, or protection of the ideology in exchange for mass-distribution of organic foods for consumers(Eden 2011). Current Japanese organic agriculture policy leans to former direction; and, it push Japanese organic agriculture sector towards conventionalization. The government should recognize ideology-oriented farmers and make policy which is in favor of them.

Table 15

Questions asked to the interviewees

Interviewee	Question
One officer of organic agriculture department in Ministry of agriculture, forestry and fisheries	
Question	How does MAFF plan to develop organic agriculture in organic agriculture policies?
	How is organic agriculture positioned in agriculture policy as a whole?
	Are human resource or budget which are allocated to organic agriculture administration enough to implement effective policy?
	Is MAFF promoting corporations' joining into organic farmign sector?
	Is there any influence form abolition of seed law in 2018 or deregulation of land law in these years on organic agriculture policy?
	Which actors does MAFF's organic agricultrue policy mainly support in organic agriculture sector?
	Can I understand national organic standard and certification changed from foo regulation which benefits consumers to support for foreign organic food producers or domestic food producers who aim to export the foods
	In national plan of organic agriculture promotion published in 2012, it is cited that orgaic agriculture technique should be developed based on regional or local weathr and geographical context. It contradicts with national standard that requires farmers to adopt unified international standard. How does MAFF consider that ?
	In national plan of organic agriculture promotion published in 2012, it is cited that the plan support both local and wider(national ot trans-prefercture) food ditsribution channel. Does it mean MAFF is planning to build dual structure of food distribution channel in organic food sector?
	How does MAFF consider large share of imported organic foods in domestic organic food market?
	How does MAFF consider stagnation of the number of organic fareres and acreage certified by naitonal organic food cetification?
	How does MAFF consider majority of non-certified organic farmers in Japan?
One local government officer of Akita prefecture	
	What is possible reasons which cause decreasing number of organic farmers who are certified by national orgaic food certification?
	Why Akita prefecture government set own organic agriculture standard while there exists national standard?
	Why does not Akita prefecture support orgnaic farmers?
	Are national and prefecture financial support for organic farmers enough to compensate higher production cost than conventional agiculture?
	Why has Akita prefecture enjoy high acreage of organic agriculture acreage comparing to other prefectures even if it has decreased these years?

Interviewee	One farmer and director of organic agricultural association in Shimane prefecture
Question	How does organic farming develop in Shimane prefecture?
	Who benefits in the development process?
	How did organic farming contribute to improvement of food self-sufficiency in Shimane prefecture after 1970s?
	Until which actor does idea of self-sufficiency in Shimane prefecture organic farming ideology include, farmer, consumer or local level?
	Why does Shimane prefecture enjoy highest share of organic acreage in whole agriculture acreage among all prefecture in Japan?
	What is possible reasons which cause increasing number of certified organic farmers in the prefecture?
	How do organic farmers in the prefecture get organic agro-inputs?
	Main distribution channel of organic farmers in the prefecture.
	One professor who researches Japanese organic agriculture
	How does JOAA consider...
	MAFF's plan to develop organic agriculture in organic agriculture policies?
	How organic agriculture is positioned in agriculture policy as a whole?
	human resource or budget which are allocated to organic agriculture administration are enough to implement effective policy?
	public support for non-certified organic farmers is enough?
	Is MAFF promoting corporations' joining into organic farming sector?
	Is there any influence from abolition of seed law in 2018 or deregulation of land law in these years on organic agriculture policy?
	Which actors does MAFF's organic agriculture policy mainly support in organic agriculture sector?
	How does JOAA consider large share of imported organic foods in domestic organic food market?
	How does JOAA consider stagnation of the number of organic farmers and acreage certified by national organic food certification?
	How does JOAA consider majority of non-certified organic farmers in Japan?
	How does JOAA plan to develop organic farming in Japan?
	How does JOAA have relation with the MAFF or public institutions?
	Two officers of MOA Nature Farming Cultural Enterprise
	What is the difference between nature farming and organic farming?
	Why does MOA distinguish nature farming from organic farming?
	Why does MOA have original certification for nature farming?
	How does MOA understand organic farming production scheme including both certified and non-certified one?
	How does MOA perceive organic agriculture policy of the Japanese government
	How does MOA plan to develop nature farming?
	How does MOA have relation with public policy?
	How nature farmers sell their products?

Source: made by the author of this paper

Chapter 6 References

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