博士論文

Sustainability of Rural Areas in the Era of Aging Societies

(高齢社会における農村地域のサステイナビリティ)

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Sustainability of Rural Areas in the Era of Aging Societies

高齢社会における農村地域のサステイナビリティ

A Dissertation

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SUSTAINABILITY OF RURAL AREAS IN THE ERA OF AGING SOCIETIES

ABSTRACT

Today, population aging is recognized as one of the most complex challenges of our society. This new demographic trend has a profound impact not only on economic and political dimensions but also on cultural and familial structures, and such impact will increasingly be intensified in the coming decades.

Among all the countries, Japan is well known for its rapidly aging and shrinking population. The current challenge of the country is not merely aging of its population, but rather a complex mix of aging trend of its demography and accompanying social challenges across all scales. It is of particular interest, especially for emerging economies where social changes including population dynamics are rapidly evolving; to observe how Japan adapts to such rapid aging that requires critical reforms in designs and functions of its society.

The issue of aging society can be discussed at different scales, such as national, community, and individual scales. Among these scales, this research addresses the issue of aging society at the community scale. While the previous studies on aging are concentrated on national and individual scales, the socio-economic impacts of aging have not been well addressed at the community scale. In particular, the process of functional decline in rural communities needs to be further investigated. Knowing that the degree of aging society is more pronounced in rural areas, this research sets its focus on examining the impact of aging population in the rural communities. Rural areas of Japan are facing functional declines, which appear in diverse dimensions such as general living conditions, resource management, and local events and traditions. Such functional declines in rural communities may be characterized as community marginalization.

The core challenge for those rural areas where aging and depopulation are progressing is to build a local system that can adapt to various functional declines. Since population aging is changing the state of rural areas, a more holistic approach is required to analyze the transition of entire rural system. This research applies the multifunctionality framework to elaborate discussions on both past and future transitions of rural areas. This

framework captures the quality of rural system based on the balance among three types of capitals, namely economic, environmental, and social capitals. The framework also suggests three possible future pathways for rural areas; they are (i) super-productivist, (ii) deagrarianized, and (iii) relocalized rural systems.

Drawing upon the challenge of community marginalization and the need for a holistic approach to examine aging society phenomenon in rural areas, this research sets its principal objective as elaborating possible responses to the continuous functional declines at the community scale as well as to discuss possible future pathways for the rural areas. In order to achieve this objective, the following two subsidiary objectives are set; (i) to elucidate the declining process of rural communities by examining the living conditions of residents, and (ii) to analyze community-based initiatives in order to discuss possible future pathways for rural areas within the multifunctionality framework.

The first objective is pursued through a fieldwork in Kamikoani village, Akita, Japan, that aims at investigating the process of community marginalization through examination of the living conditions and the state of collective actions by the community's residents. For this fieldwork, a working hypothesis was developed from the framework of community marginalization which claims that the quality of community function will decline as the size of the community population becomes smaller, and also such decline of community function level would occur with two turning points after each of which a significant fall in its community function level will occur. Based on this framework, the target communities are divided into the five community groups (labelled as Groups 1 to 5) by their population size. A questionnaire survey was conducted in the form of a complete survey. It targeted 1,039 households in all 20 communities, and there were 520 returns, which corresponded to a response rate of 50.0%. The collected data were examined through qualitative analysis as well as by statistical tests among the five community groups. In addition, semi-structured interviews to local key informants were conducted mainly to verify the findings from the questionnaire and to investigate the state of collective actions

of residents at each community groups. These two surveys were conducted jointly with the local government of Kamikoani.

Those findings of this first fieldwork suggested that there is a certain degree of divergence in the state of community function among the studied five community groups. The findings suggest that the current state of Group 5 communities, which are smaller than 40 residents, is significantly restricted in their living conditions, especially in respect to transportation and access, property management, income satisfaction, the form of social relationships, and the role of out-migrated family members. Therefore, the current state of Group 5 is considered to be in an advanced stage of community marginalization. This first fieldwork have also found that those communities in Group 4 are starting to experience downsize or disappearance of local activities, particularly in those activities related to local festivals and rituals. Such differences were only found in the qualitative factors rather than physical changes in living conditions. This result suggests that the current state of Group 4 is considered as the turning point to further marginalization. Regarding Group 1 to 3, there was no clear evidence of significant community marginalization; however the result of self-evaluation by the residents on their living conditions indicated that all five community groups are feeling a certain degree of anxiety on transportation, access to groceries, and commute to work, employment opportunities, and lack of successors.

To achieve the second subsidiary objective of this research, a second fieldwork was conducted on community-based projects in the United Kingdom. In-depth interviews were conducted with six community projects and one supporting organization in the country. The collected data were transcribed and examined by open and closed coding methods in qualitative data analysis. Some of the common characteristics of the community-based projects identified were: (i) Responding to community or social concerns, (ii) Being multipurpose in project operations, (iii) Strong sense of localism, and (iv) Networking with other projects. In addition, the following two challenges were identified: (i) Human resource issues, and (ii) Finance issue. Additionally, the role of national supporting organization was found to be critical in order to gain required knowledge and skills that are

not available within communities. The network created among the rural communities through this organization was also recognized as an important aspect for the sustainable management of the community-based projects in the UK.

Those findings from the first and second fieldworks were analyzed using the multifunctionality framework. At first, the current state of Kamikoani can be seen as the mixture of marginalization and subsequent re-organization phase to one of the possible pathways. The community marginalization is added as the fourth possible pathway for rural areas in the multifunctionality framework. The advance of marginalization at individual rural communities will ultimately lead to a larger unit of rural system such as a village or town to take this fourth direction of rural transition in which the actual quantity of three types of capitals is reduced. Secondly, regarding the current revitalization initiative by an art festival in Kamikoani, two main challenges are suggested. The first challenge is about the design of the project. The findings of the second fieldwork in the UK suggest that those community-based projects are commonly focusing on either local or social concerns. By this way, it becomes easier to have active participation of local residents to the project. In this respect, an art festival is an entirely new idea for the villagers, thus another process to present the link between the current state of the village and the possible positive outcomes of the initiative is required. The second challenge is about its finance. Currently, the entire budget is covered by subsidies from the prefectural and village governments. Although the objectives are different between the art festival in Kamikoani and community-based projects in the UK, its finance is a critical issue not only for the continuation of the operations but also for the enhancement of economic effects of their initiatives.

Based on the analysis, two major approaches for Kamikoani were discussed, which are (i) Redefinition of system boundaries for community functions, and (ii) Engagement with external entities. As the results of the first fieldwork showed, there was a divergence in the quality of community functions among the community groups. This point suggests that the present system boundary of rural communities is not working well to maintain a set of community functions; therefore those system boundaries could be re-defined based on

the types of functions. The second approach suggests that the engagement with external entities is imperative to make those rural communities socially stable. The findings from the second fieldwork also substantiate the critical role of external entities in providing required knowledge and skills for the operation of community projects. While the redefinition of system boundaries could make social and environmental aspects of communities stable, it would be a challenge to achieve vibrant economic activities internally. For such an objective, the engagement with external entities could be structurally designed.

This research made three major contributions. The first contribution is that this study situates the issue of rural declines in Japan within the context of global aging. As aging society phenomenon is going to be prevalent in emerging economies, similar patterns of rural declines are likely to occur. Such state of rural areas may be underestimated behind the rapid economic growth and emerging social issues in cities. This study structured the issue of aging societies in the rural setting and provided an empirical study on the marginalization at both community and village scales through its fieldwork. The second contribution is the integration of community marginalization within a larger conceptual framework of rural transition, which is the multifunctionality framework. These two frameworks were developed separately and in different regional contexts, however the marginalization pathway was proposed as the fourth possible direction for rural areas. By the application of the multifunctionality framework, this study brought the findings from two fieldworks to a system scale discussion. The third contribution of this study is on the conduct of empirical study about the process of community marginalization in the form of complete survey in one village. The collected data through this time of field survey will be an initial set of data for further empirical investigation of the community marginalization.

Regarding the future research, the following two topics are suggested. The first topic is a conduct of the same set of surveys in other town and village scale municipalities. This is to conduct comparative studies on the process of community marginalization. It would also be useful to conduct a longitudinal study in the same locations, though it may

not be quick enough to bring out practical policy approaches. In order to respond to the diverse state of rural communities in their marginalization states, it is an urgent issue to develop a set of approaches to all types of rural communities. The second topic is about the aging society issue in Asia. It would be extremely important to examine the aging society phenomenon at the regional scale of Asia in order to understand the social change in the rapidly aging countries. Such analysis should perhaps be done with the case of rural Japan as a reference so as to develop a comprehensive set of approaches covering different situations.

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LIST OF ABBREVIATIONS

CAP	Common Agricultural Policy
DEFRA	Department for Environment Food & Rural Affairs Government of the UK
FAO	Food and Agriculture Organization of the United Nations
IPSS	National Institute of Population and Social Security Researches
LEADER	Liaison Entre Actions de Développement de l'Économie Rurale
MAFF	Ministry of Agriculture, Forestry and Fisheries, Government of Japan
MIC	Ministry of Internal Affairs and Communications, Government of Japan
MLIT	Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan
NIC	National Intelligence Council, Government of the United States
OECD	Organisation for Economic Co-operation and Development,
RDPC	Rural Development Planning Commission
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund

1. INTRODUCTION

1.1. The Era of Aging Societies

Today, population aging is recognized as one of the most complex challenges of our society. Only a few decades ago, our major concern regarding world demography was its rapid growth and increasing pressure on the ecosystem through energy use and food security concerns (Meadows, Meadows, Randers, & Behrens lll, 1972; Meadows, Randers, & Meadows, 2004). While continuous population growth is still expected in fast-growing countries in Sub-Saharan Africa, the Middle East and South Asia (NIC, 2008), some studies suggest a decelerating trend of population growth and a stabilization of the global population at around 10 billion toward the end of the 21st century (Lutz, Sanderson, & Scherbov, 2001; United Nations, 2004). Instead of the anticipated 'population bomb' in the last century (Ehrlich, 1968), current state of global demography illustrates another trend, that is, aging of populations. This new demographic trend has a profound impact not only on economic and political dimensions but also on cultural and familial structures and such impact will increasingly be intensified in the coming decades (Fishman, 2010; Peterson, 1996, 1999). The impact of population aging will be felt across all scales of our society, hence a poor management of this new demographic trend will be a significant risk for the sustainability of social systems (World Economic Forum, 2013).

Population aging is a demographic phenomenon which refers to the increasing proportion of older population in a given society. The definition of the older population is commonly set in relation to two other population groups, namely youth population (age 0 - 14 years) and working population (age 15 - 64 years). In the case of developing countries, the age range of the working population is often set lower as age 15 - 60 years due to shorter life expectancy. Accordingly, older population is defined as age 60 years and above (Phillips, Ajrouch, & Hillcoat-Nalletamby, 2010). Based on this definition, the total number of older population globally was 841 million people in 2013 and it will increase to 2 billion people by 2050 (United Nations, 2013). The second definition of older population is set as age 65 years and above, and this is commonly used for developed countries

because of their higher life expectancy. In addition, age 65 years is widely set as pensionable age in developed countries. The actual size of older population based on this definition was 530 million people in 2010. By 2050, this population group is predicted to grow to 1.49 billion people.

Along with the term 'population aging', the other term 'aging society' is used to indicate a society with an increasing proportion of older population. 'Population aging' is mainly used in the field of demography which aims to understand "the causes and consequences of long-term shifts or transitions in health, mortality and fertility and how, together these bring about changes to the age and sex composition or structure of a given population" (Phillips et al., 2010). In other words, 'population aging' refers to the demographic phenomenon of increasing older population in a given society. The main focus rests in the demographic changes within this term. In contrast, 'aging society' is more commonly used when discussing social issues which are caused by population aging. For example, discussions on the sustainability of pension and health care systems, raising retirement ages to ensure the size of working force, and increase of social isolation among older people are series of social challenges caused by population aging. The term 'aging society' captures aging as a social phenomenon that encompasses demographic dynamics as well as changes related to social and economic challenges.

One important characteristic of population aging is its pervasive nature regardless of the difference between developed and developing countries (United Nations, 2013). In terms of geographical expansion, those areas with higher than 20 per cent of their population being older than age 65 years were concentrated in Europe and Japan in 2008. However, those countries with the same proportion of older population will be found both in North and South America, the entire Europe and Eurasia regions, wide areas of Asia and Pacific regions, and even in some of the Middle East countries by 2050. In other words, Africa will be the only region where the proportion of older population is project to remain less than 20 per cent (Petsko, 2008). By that time, roughly two thirds of older population will be living in developing countries and they will likely be a vulnerable group of

population towards social and climate changes (UNDP, 2014). In the case of developed countries, older population is aging further. The fastest growing population group in developed countries will be the oldest-old population, those aged 85 years and above. The annual rate of population increase of the oldest-old population group is 3.8 per cent and occupies 10 per cent of the total of older population group today. By 2050, this population group will increase to 392 million and will represent 4.1 per cent of total global population.

There are two main demographic factors that contribute to population aging, which are; (i) decline of fertility rate, and (ii) increase of life expectancy (Zaidi 2008; Lee, Mason, and Park 2011; OECD 2008; NIC 2008; UNFPA 2012; European Commission 2009). Decline of fertility rate primarily affects demographic dynamics by leading a society to have fewer numbers of children. The continuation of low fertility rate leads to a society with a smaller proportion of younger generation, a demographic composition that implies a society with less reproduction capacity. As a consequence, a larger proportion of older population emerges due to the relational increase (United Nations, 2010). This problem of declining fertility rate has been evident since 1950, both at the global and regional scales. At the global scale, the total fertility rate was 4.9 births per woman in 1950. Later the figure dropped to 2.6 births by 2010, and it is predicted to decline further to 2.0 births by 2050. At the regional scale, declines of fertility rate have been particularly evident in Europe and Asia. For the case of Europe, total fertility rate was 2.67 births per woman in 1950 while it went down to 1.54 by 2010. The prediction suggests a slight decline to 1.50 births by 2050. As for the case of Asia, the fertility rate was 5.83 births per woman in 1950 while it dropped to 2.25 by 2010, and is projected to be 1.89 by 2050 (United Nations, 2010).

The second main cause of population aging, increase of life expectancy has shown continuous improvements among all regions in the last 50 years. Asia and Latin America were two regions with more than 20 years rise in life expectancy. It was particularly notable that the increase in Asia was 27 years. Africa and Oceania achieved 12 years and 14 years increase respectively. Europe and Northern America had approximately 9 years increase from the 1950s to 2010. At the country level, those with more number of years

improvements are Japan, Spain, Italy and few other European countries (Christensen, Doblhammer, Rau, & Vaupel, 2009). These improvements of life expectancy have increased the chance for children and young generations to survive to their older ages (Vaupel et al., 1998), therefore the pressure on both formal and informal social care systems have continuously been increasing and related social changes have also emerged.

These two demographic trends are long-lasting and largely irreversible as countries achieve certain level of social and economic developments. This new phase of world demography is called a 'demographic transition' (Harper, 2014) and it will set entirely new situations for our societies defined by a continuous increase of older population and gradual decline in the size of working population. Such new demographic trends are often referred as an unprecedented challenge to our society today.

1.2 Population Aging in Europe and Asia Regions

As a region, Europe has the highest proportion of older population, which was 16.3 per cent in 2010. In terms of population growth, Europe has been slowing down as compared to the U.S. and other middle-income countries such as China and India. In fact, some parts of Europe are experiencing a decline in population, most notably, Eastern Germany, Southern Italy and Northern Spain. Low fertility rate of Europe has caused a gradual shrinkage of working population; this population group is projected to have a decline of 48 million people, while at the same time, the size of older population will gain 58 million people by 2050. Within Europe, those Eastern European Countries such as Bulgaria, Germany and Poland are expecting about 25 per cent of decline in their working population sizes by 2020.

Population aging has also emerged largely in Asia, however it is showing different characteristics compared to Europe, especially in its speed. Currently, the region has 6.4 per cent of its population as older population which is about 10 per cent lower than Europe. However, demographic predictions suggest that this figure is going to increase to 16.1 per cent by 2050. Within Asian region, those counties in Eastern Asia are going to have

distinctively higher proportion of older population than other parts of Asia. In 2010, Eastern Asia had 9.7 per cent of its population as older population; however, this population group will quickly surpass the level of Europe at 17.9 per cent by 2030, and will continue to grow to 25.2 per cent by 2050. Eastern Asia therefore will soon become a region with the highest proportion of older population in the world.

What is significant about this trend of population aging in Eastern Asia is its speed. European countries took about 50 to 100 years for the transition from aging to aged society, the number of years taken between 7 per cent of their population being aged 65 years and above to 14 per cent, whereas it will take about 25 or less number of years for Eastern Asian countries. In order to measure the speed of aging in a country, those categorizations of 'aging society' and 'aged society' set by the United Nation are commonly used. According to this definition, those countries which have higher than 7 per cent of their populations as age 65 and above are called 'aging society', while those countries which have higher than 14 per cent of their population as age 65 and above are called 'aged society'. These percentages, 7 per cent and 14 per cent, do not have specific meanings per se whereas the time taken for the increase from 7 per cent to 14 per cent indicates the speed of aging at the society level. For example, it took 115 years for France, 85 years for Sweden, and even the case with shortest time, United Kingdom, took 45 years for this transition. In contrast, it was 26 years for Japan, will be 22 years for Thailand, and 19 years for Singapore. Although many Asian countries still maintain a high proportion of young population, demographic predictions by the United Nations suggest such rapid aging of the countries.

The impact of such drastic increase of older population will bring different types of challenges to Asian countries. As it was mentioned earlier, population aging will be pervasive among developed and developing countries but its impact will differ from country to country. On the one hand, developed countries have gone through a certain period of economic development prior to the aging of their populations. During the period of economic development, social security systems such as pension and health care were

established. However, on the other hand, developing countries with expected aging of their populations within a shorter period of time may not be able to develop the required social systems for an aging society. This situation implies that those developing countries need to face the challenge of aging society and related cost for social cares, particularly the medical services and long-term cares, before fully benefitting from their economic development (Kalache, Barreto, & Keller, 2005; Oizumi, 2007, 2011). Hence, these countries with rapidly aging populations, largely in Eastern Asia, have to respond to aging society promptly and adequately.

In addition to the design of social systems, education not only for policy makers but also for general public is considered as a critical priority since responses to demographic issues take a long time to gain benefits of policy after the implementations (Olshansky et al., 2011). The responses to population aging and the related social challenges need to be designed according to the speed of population aging. For such situation, experience of Japan with its aging society would be valuable for those countries with rapidly aging populations.

Among all the countries, Japan is known for its highest proportion of older population. The country had 24.1 per cent of their population as older population in 2013 (Cabinet Office of Japan, 2013) and the same figure is projected to reach 40 per cent by 2050 (MLIT, 2011). Such high proportion of older population is related to the declining trend of total population. The total population of Japan reached its peak in 2008 at 127.2 million, and the country has entered its shrinking period (Eberstadt, 2012; Senno, 2013). Japanese society has lost at the annual average of 160 thousand people so far till 2013 (Cabinet Office of Japan, 2014) and the population prediction indicates 25 per cent decline from 127 million to less than 90 million people by 2050 (MLIT, 2011).

The main cause of this rapid population decline is the country's low capacity of population reproduction. The current total fertility rate of Japan has 1.41 births per woman which is much lower than the population replacement rate (commonly set as 2.1~2.2). Over a generation, such state with low fertility rate will cause a decline of working force in the

country and slows down its economic growth. Furthermore, it will bring a burgeoning pressure on the sustainability of social systems and affect the financial state of national and regional governments (Cabinet Office of Japan, 2014).

1.3 Population Aging at Three Different Scales

1.3.1 Population aging at a national scale

Another main difficulty in addressing population aging exists in pervasive nature across different scales. Such characteristic can be classified in three scales, namely national, community, and individual scales. At the national scale, population aging is often framed as the issue of social security systems, especially social cares that involve intergenerational dimension such as national pension, health care, and long-term care for the older population (Glasgow & Brown, 2012; Lowe & Speakman, 2006; Lowe & Ward, 2009). These concerns around social cares are caused by the changing balance between generations (Tinker, 2002). More specifically, current systems are based on the proportional balance between a group of people who receive services and another group of people who support the operation of the systems. This balance is examined by the number of older population and working population. Among the developed countries, there were four persons in working population to support every one older resident in 2010. However, the demographic projections suggest that it will decline to three persons in working population to support one older resident by 2025 (NIC, 2008). In developed countries, the oldest-old population group (aged 85 and above) is consistently growing. Since this group of population is identified as the most susceptible to diseases and also has a higher risk of developing disabilities (Christensen, McGue, Petersen, Jeune, & Vaupel, 2008; Vaupel et al., 1998), increase of this population group causes an increasing pressure on the budgetary scheme for medical services and long-term care. The structure of social cares based on the system which younger generation support older generation will be required to have a drastic reform to adjust to this new demographic trend.

In contrast to such a negative perception to population aging, demographic and public health studies claim that the emergence of aging population itself is in fact one of the greatest achievements of mankind owing to the achievement of longevity and related improvement of public health and general socio-economic conditions (Christensen et al., 2009). This is also coined as the 'triumph of development' (Dobriansky, Suzman, & Hodes, 2007; UNFPA, 2012). These claims point out that the current perception towards population aging, which problematizes aging, needs to be changed to another perception to embrace aging both at individual and societal scales (Ryan-Nicholls, 2004; Walsh, O'Shea, Scharf, & Murray, 2012). Today, younger generations in all regions are expecting a longer life expectancy than their previous generations and this is 'surprisingly a global affair' (Fishman, 2010). Knowing aging of society is going to remain as a long-term trend, it would be critically important to recapture the perceptions to and the roles of older population in our societies.

1.3.2 Population aging at the community scale

The impact of population aging is also prevalent at the community scale. The core challenge of population aging at this scale is about how to ensure the quality living conditions for all generations. It is the issue of designing an inclusive local society with higher proportion of older population. This local scale is considered important since people experience actual changes in their daily lives and make various efforts as responses at this scale (Wilson, 2010).

The discussed topics at the community scale vary in the context of urban and rural areas. As for the aging in urban areas, issues as social isolation and poverty among households of older residents (NHK, 2012; Shirahase, 2006), shrinking cities and abandonment of complex housing (Pallagst & Wiechmann, 2013), and disaster preventions are discussed in line with aging of population. Recent community-based initiatives in cities such as Groundwork in the UK (Fordham, Gore, Fordham, & Lawless, 2002; Parker & Murayama, 2005) or Machizukuri (participatory planning process) in Japan (Evans, 2002;

Kusakabe, 2013) partly aim to respond to local challenges that include the demands of older residents.

In rural areas, population aging is appearing at a faster speed than urban areas; rural aging is also increasingly a global phenomenon (OECD, 2008). This is largely owing to the large scale outward migration of young population from rural areas and related increase of the proportion of older population in the countryside. The 'greying countryside' is a term that emerged in the UK and applied to describe the situation of rural areas where higher proportion of residents are older population (Lowe & Speakman, 2006). During the national economic development, rural areas became a place to provide their young population as 'export commodity' to cities (Johnson, 2009). As a consequence, those small villages in rural areas have lost their social vitalities and experienced declines in living conditions. These declines in general living conditions, resource management, and local events and traditions at rural communities have emerged as urgent issues in rural areas of Japan (Niinuma 2009; Nishino 2010).

As the population aging continues general living conditions of residents as well as the vitality of rural communities decline further. As a consequence, many rural areas have to face a challenge of their own sustainability at individual communities (Kudo & Yarime, 2012). This phenomenon of rural decline at the community scale is called community marginalization (Ono, 1991, 2008). The process of community marginalization occurs when the required community functions to sustain the living conditions and the local activities are lessening mainly due to the decline of community population (Kasamatsu, 2009; Odagiri, 2009, 2011b; Sakuno, 2006). In addition, as the residents of a community get aged, it would also accelerate the community marginalization. The accumulation of such functional declines at the community scale would also lead to the marginalization of a larger rural area.

Overall, at this community scale, the impact of aging is not limited to those individuals who are becoming older, yet it appears at diverse dimensions of regional society and individual communities.

1.3.3 Population aging at the individual scale

Aging is fundamentally a life course process that belongs to individuals. Regardless of the difference between developed and developing countries, older people are often perceived as more vulnerable to social changes and they tend to experience a greater degree of social isolation and loneliness. Particularly, loneliness is a widely discussed concept. Loneliness concept does not indicate the state of an individual being alone, instead it describes the state of individuals at the loss or absence of an intimate or needed relationship (Killeen, 1998; Walton, Shultz, Beck, & Walls, 1991). As individuals go through different stages of life course, people experience various patterns of losing connections to social relationships that they have built as they age. Ordinarily, retirement is one representative occasion of losing connections that could be a subject to vulnerability not only in financial terms but more prominently in connectedness to social relationships. Deaths of partners, close friends, and family members are also symbolic moments that bring loneliness to older people. Another research suggests that persons with higher degree of loneliness tend to be male residents with low income and have infrequent communication with their children and relatives, and also take care of their spouse or relative at home (Drennan et al., 2008). Poor physical health, low morale, and communication and transportation difficulties could also be a cause of social isolation (Findlay, 2003). In terms of local living conditions, such changes as decline of local services such as closure of local stores, pubs and post offices could increase the level of social isolation among older residents, especially in rural areas (Ryman, 2011). On top of general life course that can increase loneliness among older people, gender inequality often appears as the second layer of social isolation. Older women often receive a ‘double jeopardy’ which situates them first as ‘elderly’ and second as ‘woman’. In addition, older women often face severer living conditions as they tend to be a subject group of discrimination not only in employment but also in access to daily needs, ownership of properties, and even participation in leisure activities (Pritchard & Morgan, 2000; Teo, 1997; UNFPA, 2012). Such socially constructed inequalities to older woman tend to be more evident in rural areas. Recent price increases in energy and food costs are giving

greater pressure on household budgets directly and it is generally more difficult for older women to handle such difficulties in their daily lives (DEFRA, 2012; P Milbourne, 2012).

The core challenge of social isolation and loneliness of older people exists in recognizing older population as active participants of society (P Milbourne, 2012). Often the image of elderly is associated with negative connotations and it standardizes older people in a society. Such stereotypes classify older population as welfare beneficiaries and their contributions to society are underestimated. However, in reality, the pre-retired and older residents are often found as major contributors in general, caregiving and volunteering in local communities and also active in entrepreneurships particularly in rural areas (Kincade et al., 1996; Stockdale & MacLeod, 2013; Stockdale, 2006a).

1.4 Problem Statement

1.4.1 Rural areas have earlier experience of aging society phenomenon

In order to examine the impact of aging society, it would be important to consider on what scale a study needs to be conducted. Previous literature has concentrated on two groups of studies. The first group is at the national scale to analyze possible threats to the sustainability of social systems based on demographic predictions and financial and policy analysis. The second group is at the individual scale to examine the physical and psychological changes that one experiences throughout a life course as well as the structure of social relationships those older residents are involved. While studies in these two groups have been accumulated, the community scale is considered as an important platform for actual actions to the aging of rural societies. Among the studies on population aging at the community scale, more studies have been conducted in urban areas or urban-rural contrasts (Lidgard, 2006; Walford & Kurek, 2008), while there has been little attention to the issues related to aging in rural areas (Wenger, 2001). The actual number of older people in rural areas is increasing and, in fact, around 60 per cent of older population will be residing in rural areas by early of this century (Christensen et al., 2009; International Rural Aging Project, 1999). Although it would be critically important to note the geographical and

cultural differences between urban and rural areas, it would still be valuable to examine the social changes that rural areas experience as they undergo the process of aging society. Those socio-economic impacts are not yet well studied (Burholt & Dobbs, 2012). Furthermore, there is a great degree of anticipation about possible withdrawal of residence from rural areas, and therefore, such process of decline at the community scales need to be investigated (RDPC, 2008). It is also underlined that the way rural areas "cope with the aging 'wave' over the next few years can be expected to pave the way for the rest of the country" (Champion & Shepherd, 2006). Knowing that the degree of population aging is more pronounced in rural areas, this research sets its focus on examining the impact of population aging at the community scale by taking a rural village in Japan as the case for an empirical study.

1.4.2 Capturing the declining process of social functions at the community scale

In Japanese rural studies, there has been a considerable amount of academic interests in understanding the impact of depopulation and aging of residents at the village and community scales. These topics are termed as "*Kasomondai (depopulation issues)"* and emerged in rural areas of Japan during 1950s~60s when Japan achieved a rapid economic growth (Minami, 2007; Morii, 1995). *Kasomondai* itself does not include aging population explicitly, however, local challenges in rural areas such as shortage of manpower in farming and forestry, increasing difficulties in access to public services, and downsizing of local events are discussed in line with depopulation and aging of residents in rural communities. In addition, collective actions of residents are considered as critical resource to sustain various social functions which are vital for the sustainability of rural communities. These social functions at the rural community scale have also faded due to depopulation and aging of local residents. Understanding such process of declines of social functions has become one of the major subjects in Japanese rural studies. While some studies aimed to set categories to describe different qualities of rural communities by demographic indicators such as the proportion of older population or the degree of depopulation (Ono, 1991, 2008; T. Yamamoto, 1996), others aimed to depict the declining

process of social functions by more relative interpretations of community function based on the size of community populations (Kasamatsu, 2009; Odagiri, 2009, 2011b; Sakuno, 2006). Further examinations on the process of community decline as well as actual changes that residents experience need to be investigated (RDPC, 2008). Such studies will be able to provide empirical-based findings to adequately describe the process.

1.4.3 Holistic approach to capture the transformation of rural areas

As depopulation and population aging are becoming two prominent social changes that bring a series of challenges to rural areas, it is important to have a holist view to capture the qualitative changes of the system by this phenomenon. Such transformation of rural areas is discussed in recent studies of rural transition and community resilience (Gibson, Cahill, & McKay, 2010; Huylenbroeck, Vandermeulen, Mettepenningen, & Verspecht, 2007; Ilbery, 1998; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008; Wilson, 2008, 2012a). In contrast, previous studies concerning rural areas have taken topic-based approaches in such topics as affordability of housing (Gallent & Robinson, 2011), access and mobility to basic items (Gray, Farrington, Shaw, Martin, & Roberts, 2001; Smith, Hirsch, & Davis, 2012), remote health (Farmer, Lauder, Richards, & Sharkey, 2003; Ryan-Nicholls, 2004), and rural migration (Champion, 1989; Klinthäll, 2006; Stockdale, 2002). While these topic-based researches would be valuable for practical responses to each challenge, it would be critical to construct a discussion for the future direction of the entire rural area. In order to elaborate a solid discussion from a holistic perspective of the aging society issue of rural areas, this dissertation applies the multifunctionality framework with a keen focus on rural transition and transformation researches.

1.5 Research Objectives

In order to fulfill the identified research gaps in problem statement, this dissertation sets its principle objective as elaborating possible responses to the continuous functional declines at the community scale as well as to discuss possible future pathways for rural areas. In order to achieve this objective, the following two subsidiary objectives are set:

1. To elucidate the declining process of rural communities by examining living conditions of rural residents
2. To analyze community-based initiatives in order to discuss possible future pathways for rural areas within the multifunctionality framework

The first sub-objective aims to capture the actual process that a rural community experiences while it undergoes a decline of various functions at the community level. This declining process is also referred as community marginalization. Once this objective is achieved, it would be possible to discuss the kind of declines residents experience in their living conditions and what degree of collective actions of residents are likely to be remained.

The second sub-objective is set with an intention to discuss possible future pathways for rural areas that are facing social changes caused by the aging of population. In order to adopt a holistic perspective to examine rural transition, the multifunctionality framework is applied in this research. This framework captures both the past transitions and possible future pathways for rural areas. While the first sub-objective of this research addresses the marginalization process of rural communities, it would be important to explore alternative pathways for rural communities. This research takes the community-based projects in the UK as a reference case and by identifying common characteristics and challenges; this research aims to analyze alternative future pathways within the multifunctionality framework.

The following list of research questions is derived from these two subsidiary objectives of this study.

Research questions for sub-objective 1: The declining process of rural communities

1. On what factors in resident's living conditions does the declining process of a rural community appear?

2. What kind of changes does a rural community experience as it undergoes a process of functional declines, especially in the degree of collective actions by residents and the types and quality of local activities being maintained?

Research questions for sub-objective 2: Possible future pathways for rural areas

1. What would be a legitimate process to discuss possible pathways for rural transitions at the regional scale?
2. What characteristics are the common features as well as challenges among the established community projects?

1.6 Thesis Structure

Chapter 1 briefly introduces the topic of population aging and provides the review of earlier studies on aging societies. The latter part of the chapter presents the principle objective, subsidiary objectives, and subsequent research questions for this research that aim to fulfill the identified research gaps in literature review.

Chapter 2 looks into the current demographic trend at global, regional, and national scales. This process illustrates different degree of population aging in different parts of the world. Then, this chapter also illustrates two types of aging societies in terms of the speed of population aging between Europe and Asia. The current demographic state of rural areas in Japan is also presented to depict the different degree of population aging between urban and rural areas.

Chapter 3 introduces the discourse of multifunctionality. This chapter first explains the original claim of multifunctionality in agriculture and rural development policy literatures. Then, it introduces the recent interpretations of multifunctionality that brings the concept to an analytical framework to capture the quality changes of rural system over time. This perspective of multifunctionality also realizes the impact of larger social changes to the entire rural system. Following to the recent multifunctionality discourse, this research applies the multifunctionality framework to analyze the findings from two fieldworks. At

last, this chapter provides detailed explanations on the marginalization of rural communities in rural areas of Japan. This section provides the review on the discussed topics in depopulation and aging issues in rural Japan and describes the framework of community marginalization.

Chapter 4 introduces the first fieldwork of this research conducted in Kamikoani village, Akita, Japan. This fieldwork is designed to respond to the first sub-objective of this study that aims to analyze the declining process of rural communities. This chapter first provides the demographic and economic structures of the village and also the justifications to set this village for the site of this fieldwork. It then explains the design of fieldwork which is composed of questionnaire survey to households and semi-structured interviews to key informants. This chapter also explains the process of developing a working hypothesis for this fieldwork that is based on the framework of community marginalization. The results from questionnaire and semi-structured interviews are presented jointly to describe the difference among the studied community groups. At the last section of this chapter, those findings are analyzed within the framework of community marginalization.

Chapter 5 introduces the second fieldwork conducted in the UK that responds to the second sub-objective of this study that aims to analyze community-based initiatives in order to discuss possible future pathways for rural areas within the multifunctionality framework. This chapter first describes the pattern of internal migrations and the challenges of rural areas in the country. Then, it describes the design of the survey as well as the method for the data analysis. In-depth interview surveys to those six community-based projects across the country as well as one national supporting organization are conducted to find out the common characteristics of community-based initiatives. After the detailed descriptions of the six community-based projects, the findings from the in-depth interviews are presented.

Chapter 6 brings the findings from two fieldworks in this research together and conducts detailed analysis on the possible future pathways for rural areas within the multifunctionality framework. This chapter starts from revisiting the two subsidiary objectives of this study and four subsequent research questions. Then, it points out the

divergence among communities in Kamikoani village in terms of their current qualities of community function. Based on this discussion, this chapter raises revitalization, welfare-based, and soft-landing approaches to different community groups. This chapter also discusses practical implications of findings to the marginalizing communities by proposing the redefinition of system boundaries to form new units for declining functions and the engagement with external entities to gain the types of functions that cannot be produced internally. This chapter concludes with academic contributions, limitations, and topic for future researches.

2. POPULATION AGING AS A GLOBAL TREND AND EMERGING CHALLENGES IN RURAL AREAS

This chapter first presents demographic figures to confirm current situation of population aging in the global and regional populations. Secondly, this chapter illustrates two different types of population aging at the regional scale in terms of the speed of aging, namely slowly aging and rapidly aging, with a particular reference to Europe and Asia. The third section of this chapter describes the urban-rural differences among OECD countries to illustrate the uneven progress of population aging at the country scale. In the fourth section, the case of Japan is introduced with a succinct review of the aging and depopulation figures both at the national and rural area scales. The last part of this chapter outlines literature reviews on community marginalization phenomenon from Japanese rural studies in order to describe current challenges of rural areas in Japan.

2.1 Population Aging as New Global Trend

2.1.1 Aging at the global scale

Today, population aging is recognized as a new demographic transition that changes the preconditions of our society. In some of the developed countries, the continuous growth of total population cannot be expected and the sizes of youth and working populations are predicted to shrink further in the future. A series of social reforms are required in order to respond to such new demographic changes and also to mitigate the impact of population aging at various scales according to the context of each region and country. Since any measures to demographic issues take at least a generation time to observe their results, the earlier the discussions for the preparations begins the better as this will help in putting in place proper social measures especially at the macro scale responses (Bloom, Canning, & Fink, 2011).

Figure 1 shows a long term trend and projections of the global population as well as its composition by four age groups from 1950 to 2100. The first notable point is that the global population will grow continuously in to the future as it has been anticipated since the

last century. The total size of the global population is projected to exceed 8 billion people by 2025, 10 billion people by 2060, and will reach 12 billion people by 2100 (United Nations 2012)[1]. Figure 1 also shows that the increase of age 15-64 population group has been the major contributor for the growth of global population not only in the past but also in the future. The size of age 15-64 population group in 2010 was 4.54 billion people, and it is projected to be 6.03 billion by 2050. After 2050, its growth is expected to be slower yet projected to grow to 6.53 billion people by 2100. While at the same time, the age 15-64 population will lead the global population growth, the age 0-14 population group is predicted to be stable throughout the projected time; the size of this youth population was 1.82 billion people in 2010 and it is projected to remain just below 2 billion people towards 2100. Lastly, the population groups of age 65-74 and age 75 and above are projected to increase their shares in the global population in coming decades. In the past, the total size of these two population groups was below 200 million people during the 1950s~60s. Later, it doubled by 2005, yet the combined size of these two population groups remained 531 million people (321 million of age 65-74 and 210 million of age 75 and over) in 2010 which was 7.7 per cent of the global population. However, the predictions suggest that the size of these population groups will increase to 1.48 billion people by 2050 and 2.38 billion people by 2100. This group of older population will occupy 15.6 per cent of the total population by 2050 and 21.9 per cent by 2100.

[1] The other scholars suggest that the growth of the global population will reach 10 billion people around 2050 and remains stable towards 2100 (Harper, 2014; Lutz et al., 2001)

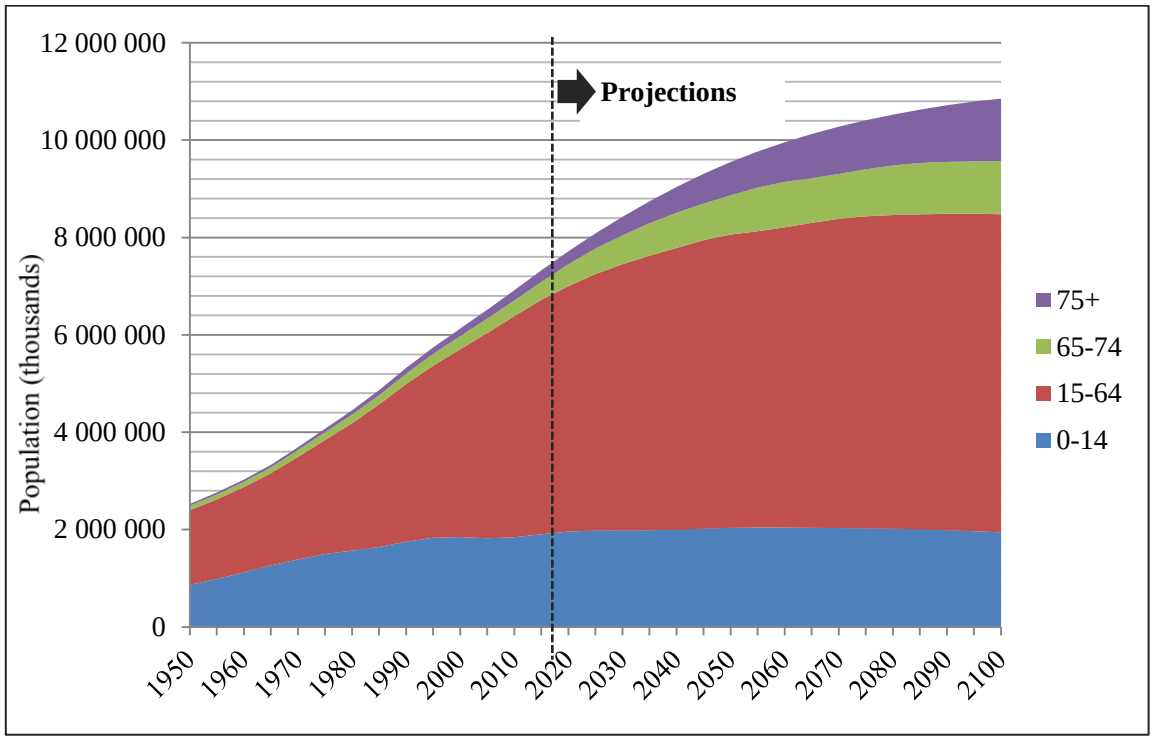

Figure 1 Global population with four age groups: trend from 1950 and projections to 2100 (Source: created from the UN Statistics)

Note: figures for 2015 and later are predictions based on middle estimate TFRs by the United Nations

2.1.2 Aging at the regional scale

The trend of population aging can also be observed at the regional scale. Figure 2 shows the share of age 65 and above population in the global population and in six regions. From 1950 to 1975, all six regions had lower than 10 per cent of their populations as older population. In 1980, Europe became the first region where the proportion of older population exceeded 10 per cent. Since this time, Europe has been the region with the highest proportion of older population up to the current (16.8% as of 2010) and will remain as the most aged region until 2075 when Latin America is predicted to surpass them as shown in Figure 2.

Europe, Northern America and Oceania have formed a group of regions with higher proportion of older population than the other three groups. Especially, Europe's proportion

has reached 16.3 per cent in 2010; by this time Europe is the only region where higher than 15 per cent of their population is older population. Northern America had as high proportion of older population as Europe until 1990 at 12.3 per cent. However the region did not have much increase during 1990s and early 2000s. Therefore the figure for Northern America remained lower than 15 per cent at 13.2 per cent in 2010. Oceania traced a similar pattern like Northern America. The region had 7.1 per cent of their population as older population in 1985, later by 1990 it increased to 9.1 per cent, yet it remained around 10 per cent by 2010. These three regions, group of developed countries, consisted of a group of higher proportion of age 65+ population than the world average (7.7 per cent) in 2010.

The proportion of age 65+ population in the world average had been just above 5.0 per cent from 1950 to 1985. From 1990, it started to increase gradually and reached 7.7 per cent by 2010. Asia, Latin America and Africa regions have formed a group of younger populations; figures of these regions remained lower than the world average. These three regions had their proportion of age 65+ population at 3~4 per cent from 1950 to 1985. However from 1985, Asia and Latin America experienced a steady increase of up to 7.0 per cent by 2010. Projections suggest a continuous increase of older population in these two regions towards 2040. By this time, these two regions will reach the level of 15 per cent, 15.5 per cent for Latin America and 14.9 per cent for Asia. After 2040, Latin America will continue aging and will go through two important points. The first is 2060 when the proportion of age 65+ reaches the level of Northern America at 22.7 per cent, and the second is 2075 when the region reaches to the level of Europe at 27.0 per cent. Aging rate of Latin America will surpass Europe by 2080 at 27.9 per cent and it will become the world's most aged region. This will further continue and the share of age 65+ population will reach 30.5 per cent by 2100.

Asia will also have a continuous aging process towards the future, yet its degree will remain at a lower level than that of Latin America. Asia will surpass the figure of Oceania in 2055 at 19.3 per cent (Figure 2). However the same figure will remain lower

than Northern America and Europe. By 2100, Asia is projected to have 26.0 per cent of its regional population being older than 65 years old. However, it would be critically important to consider the size of older population in Asia as compared to other regions with higher figures. Although the proportion of older population will remain lower than Europe, Latin America, and Northern America, Asia will face a greater degree of social demands to respond to aging society issues due the greater size of older population.

Among the three regions that hold relatively younger populations, Africa took a different path from Asia and Latin America after 1985. The region had and will continuously have lower than 5 per cent of its regional population being older than 65 years old by 2040. In other words, Africa will remain as the region with the highest percentage of young population in the world in next few decades. According to the projection, the proportion of age 65+ population will reach higher than 5 per cent by 2045 at 5.2 per cent, and later its growing pace will be faster. The figure will surpass 10 per cent by 2080, and it will reach 14.0 per cent by 2100. Similar to the case of Asia, it will be important to pay a close attention to the actual size of older population in Africa.

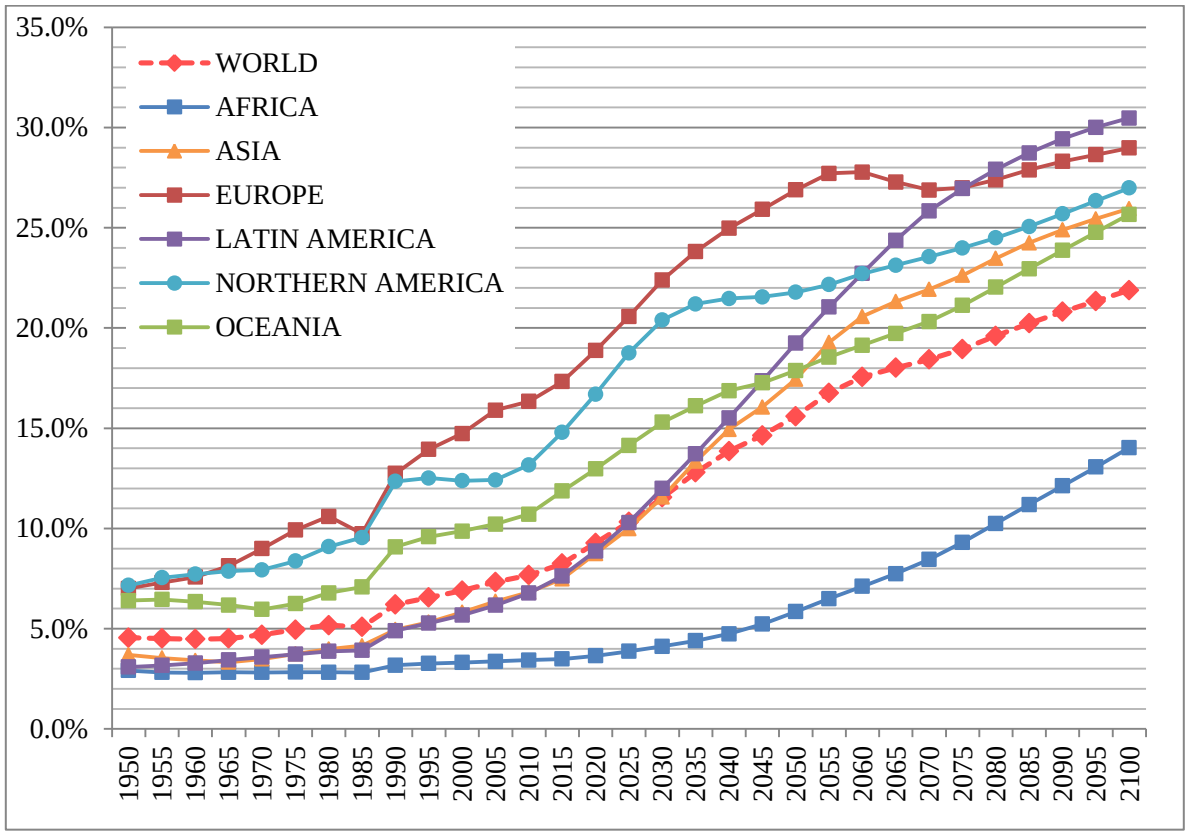

Figure 2 Proportion of age 65+ population in the global population (Source: created from the UN Statistics)

2.2 Causes of Population Aging

2.2.1. Increase of life expectancy at birth and later life

The first major demographic factor that contributes to population aging is the increase of life expectancy both at birth and later in life. Today, in all parts of the world, people have a longer life expectancy than their ascendant generations. This is a rigid evidence of achieved development through public health and socio-economic wellbeing (UNFPA, 2012). Additionally, the increase of life expectancy among the older population is particularly noteworthy (Zaidi, 2008). This is due to the improvement of medical treatment for those with certain ills and the increase of healthy life expectancy (Grimley, 2000).

Figure 3 shows life expectancy at birth in six regions in the five year period from 1950 to 2050. In 1950-1955, there was a greater variation in life expectancy among the six regions. Northern America, Europe and Oceania had longer than 60.0 years, particularly the figure of Northern America was already close to 70.0 years at 69.0 years. In contrast, Asia and Africa had lower life expectancies at 41.4 years and 36.3 years respectively. Latin America had about 10.0 years longer life expectancy than Asia at 51.4 years.

Since the 1950s, Northern America, Europe and Oceania had a steady improvement in their life expectancies and all three regions achieved higher than 75.0 years. Especially Northern America reached almost 80.0 years at 79.5 years by 2005-2010. These regions will continuously have steady increase in their life expectancies and all three regions will achieve higher than 75.0 years by 2045-2050.

Rapid improvements of life expectancy were observed in the rest of three regions. Asia particularly had an increase of 27.0 years from 41.4 years in 1950-1955 to 68.5 years in 2005-2010. In the same period, Latin America had approximately 20.0 years increase from 51.4 years to 71.6 years. These two regions will have steady increase to 75.0 years and above by 2045-2050.

Africa also achieved the increase of 15.0 years from 36.3 years in 1950-1955 to 51.4 years in 1985-1990, however the region experienced a slight decline from 1990s to early 2000s. Today, Africa's life expectancy remains around 50.0 years and that is more than 15.0 years behind the other regions. However, the projection suggests a steady improvement of life expectancy and it is expected to reach 64.9 years by 2050. As the life expectancy of Africa improves, the total number of older people will increase.

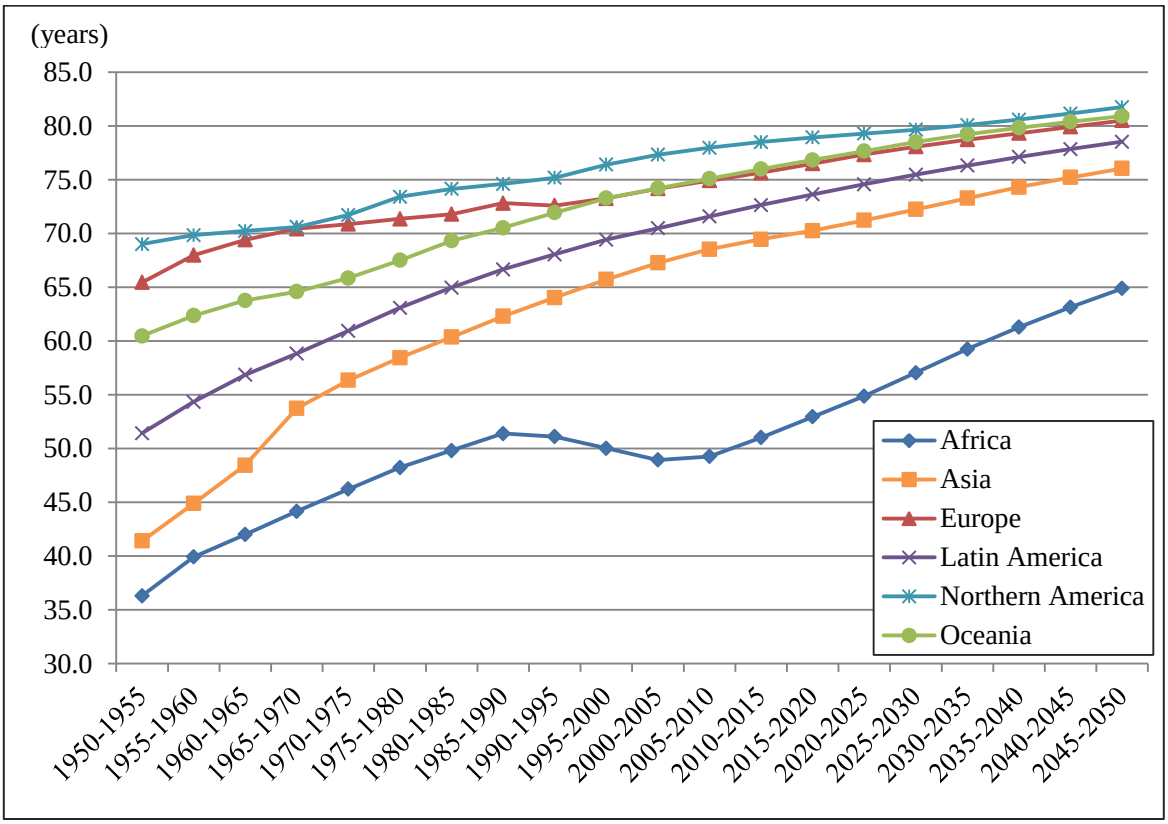

Figure 3 Life expectancy at birth in six regions (Source: created from United Nations 2004 WORLD POPULATION TO 2300)

The improvement of medical care and public health also has a great impact on the life expectancy at a later life. Figure 4 shows life expectancy at age 65 years old in the selected OECD countries between 1970 and 2010. There is a general tendency of increase among all the countries. In 1970, the OECD average life expectancy of population at age 65 was 14.1 years, while it increased to 17.4 years by 2010; this corresponds to 3.3 years increase in the last 40 years. Today on the average, populations at age 65 have a great chance to live to over 82 years old. The largest number of increase was observed with the case of Australia (+5.1 years). Following Australia, two Asian countries, Japan and Korea achieved 4.8 years improvements. In contrast, Poland had achieved additional 1.2 years which was the smallest number of improvement among the selected countries. Although the available data is limited to developed countries, it is likely to observe improvements of life

expectancy at a later life also in developing countries in the near future especially with knowing their life expectancy at birth has increased significantly.

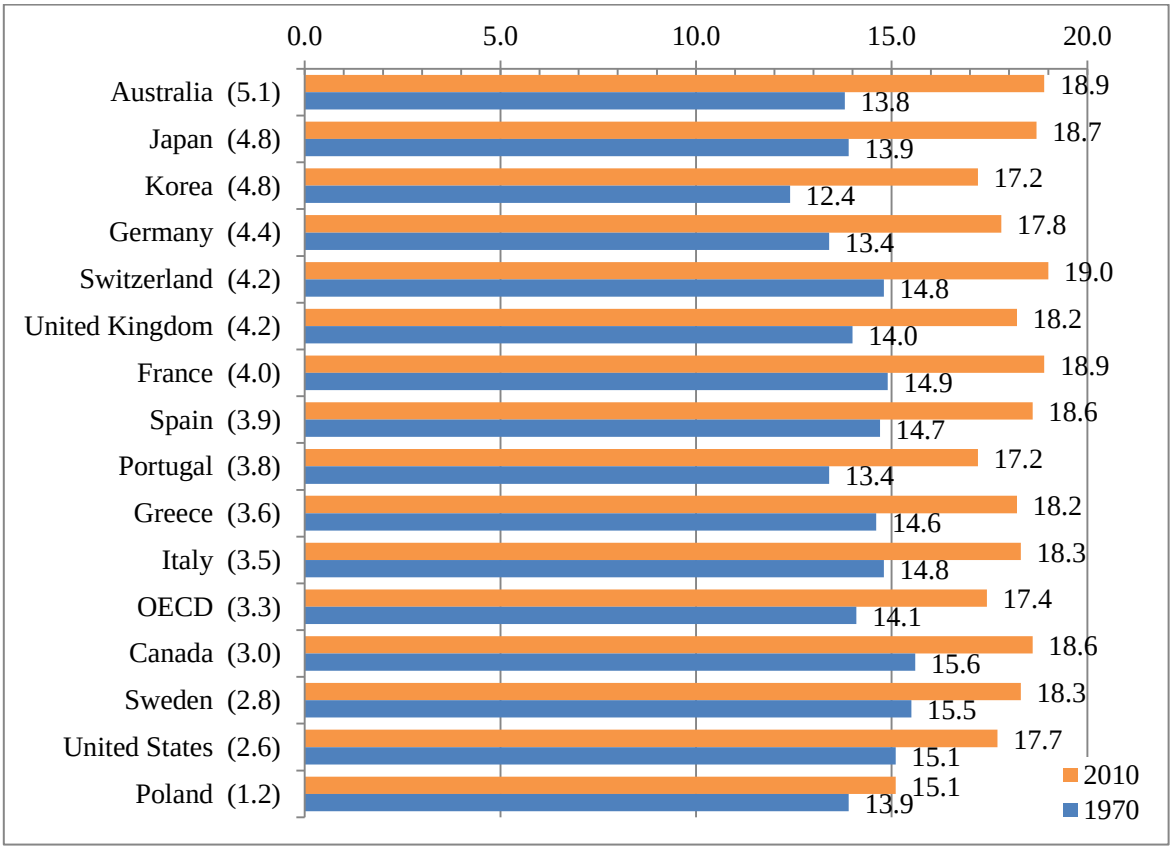

Figure 4 Life expectancy at age 65 years old among the selected OECD countries (Source: created from OECD demographic statistics)

Note: Numbers in brackets next to names of countries are the increased years from 1970 to 2010.

2.2.2 Decline of total fertility rate

The other demographic factor that contributes to population aging is the decline of total fertility rate (TFR). When TFR of a given country declines, the size of age 0-14 population becomes smaller. Therefore, the proportions of other age groups, age 15-64 and age 65 and above, increase. Figure 5 highlights the declining trend of TFR in the world and

six regions from 1950 to 2100. Those figures of 2015 and onwards are projections based on the mediate fertility rate that assumes TFR will restore to around the replacement rate of 2.0-2.1 in a long term[2], therefore TFR of all regions are approaching the replacement rate by 2100.

In 1950-1955, the world's average TFR was 4.97 births per woman. Similar to the case of proportion of age 65+ population, there are two groups of regions that behave differently. The first group is that of lower TFR than the world average, they are Europe, North America and Oceania regions. Europe particularly showed distinctively lower TFR at 2.67 births per woman in 1950-1955. North America and Oceania had 3.35 and 3.84 respectively in the same year. In this lower TFR group, Europe and North America went below the replacement rate by 1980-1985 while Oceania also experienced a decline to 2.49. Europe experienced further decline of TFR and hit its lowest figure at 1.43 twice in 1995-2000 and 2000-2005. Later the region had a slight recovery to 1.54 by 2005-2010, yet it has remained below the replacement rate. In contrast, Northern America recovered its TFR to 2.0 by 1985-1990 and has remained constant at around 2.0 by 2010.

The second group was composed of Africa, Asia and Latin America and these regions have higher TFRs than the world average. During 1950-60s, the TFR of these three regions were higher than 5.50 births per woman. Within this second group, however, Asia and Latin America started to show a different pattern of change from Africa; these two regions experienced drastic declines of TFR from 1970 to the present. TFR of these two regions was approximately 5.00 in 1970-1975 and it dropped to 2.30 by 2005-2010. This is one of the major causes of the projected rapid aging of Asia and Latin America in the coming decades. In contrast, Africa maintained its TFR higher than 6.00 by 1985-1990 and still maintains a significantly higher rate than the other regions; currently the region's TFR is 4.88 births per woman.

[2] In demography, TFR of 2.1 denotes the replacement rate that explains the reproduction of same size population among generations. It simply assumes that if two adults (a couple) reproduce the same number of new population, then it becomes possible to maintain the same size of demography over time. It is also commonly set as 2.1~2.2 due to the consideration of certain mortality rates at birth.

The projected figures suggest that the trend of TFR towards the future will be lower than the replacement rate. By 2005-2010, all regions except Africa have declined to the range of 1.4-2.6 births per woman. Corresponding to the further declines of TFR in Asia and Latin America, the figure of world average has also become lower. At the same time, TFR of Africa is also expected to decline gradually towards 2100. However, the degree of decline is slower than other regions. Although the predicted figures are dependent on the medium fertility rate, the actual degree of declines could appear more rapidly than the prediction, the general trend of world TFR is a long term decline.

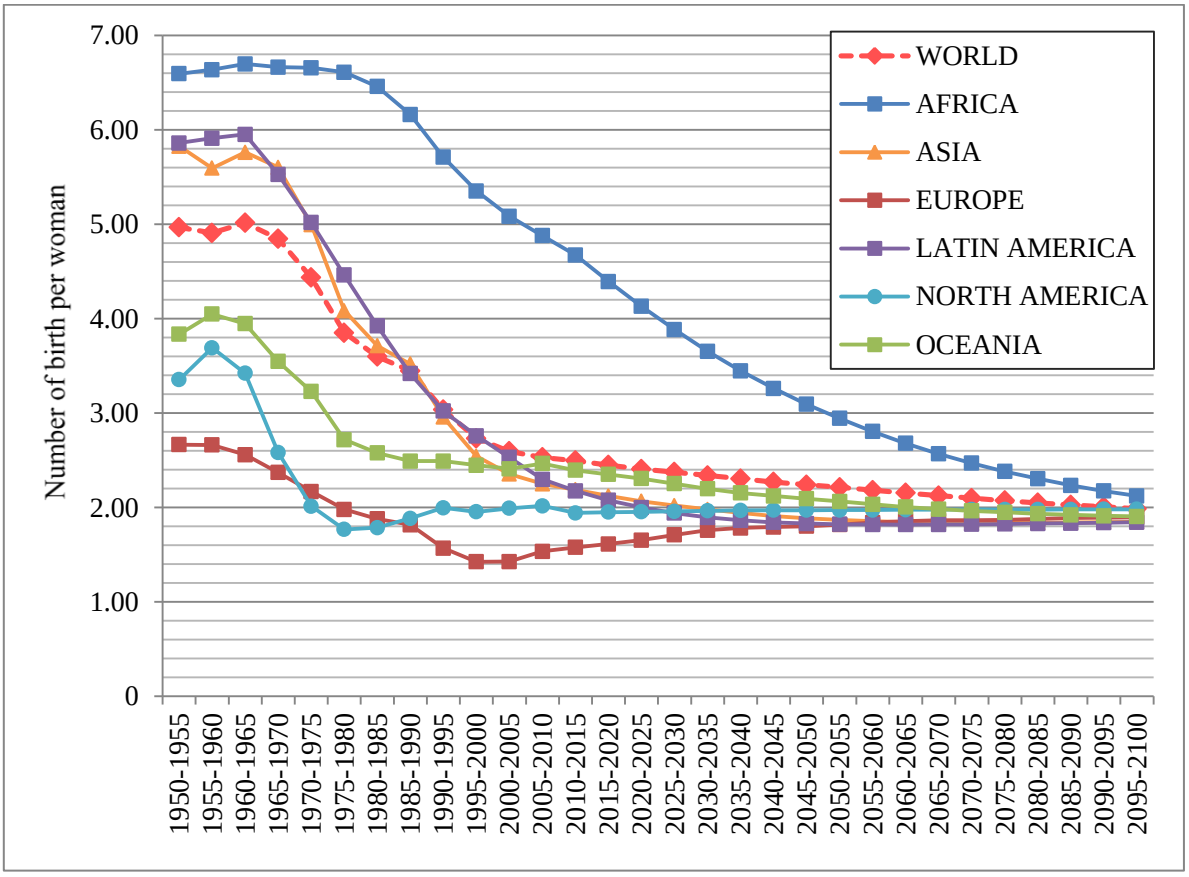

Figure 5 Total Fertility Rate of the world and six regions (Source: created from the UN Statistics)

2.2.3 Actual size of older people in six regions

While the proportion of older population is commonly used to discuss the degree of population aging at regional and national scales, the actual size of older population is also an important figure to examine the impact of population aging. The total size of age 65+ population today is approximately 600 million people. Predictions suggest a rapid increase of older population and it is expected to surpass 1 billion people by 2035 at 1.1 billion people as shown in Figure 6. Furthermore, it will reach 1.7 billion people by 2060 and 2.4 billion people by 2100. In the case of these three developed regions, Europe has lower than 200 million people, Northern America has around 100 million people, and Oceania will have much lower size between 10~17 million over the time. Latin America also has similar pattern as Europe and the region will maintain its older population to smaller than 200 million people.

While the proportion of older population will always be higher in developed regions, namely Europe, Northern America and Oceania, the actual size of older population will be greater in developing regions especially in Asia and Africa. By 2015, Asia will be home to 328 million older people. This figure is projected to exceed 1 billion people by 2060. Later, the increase of older population in Asia will be slower and its size will reach 1.2 billion people by 2100 (Figure 6). Africa will lead the increase of older population in the world demography from 2060 towards 2100 (Figure 6). Between 2015 to 2055, the size of older population in Africa will remain smaller than that of Europe which is less than 200 million people, however, the region will be home of 300 million older people by 2075 and the same figure will be 587 million by 2100. Although the size is about half of Asia, Africa will have 300-400 million more older population than the other four regions in 2100.

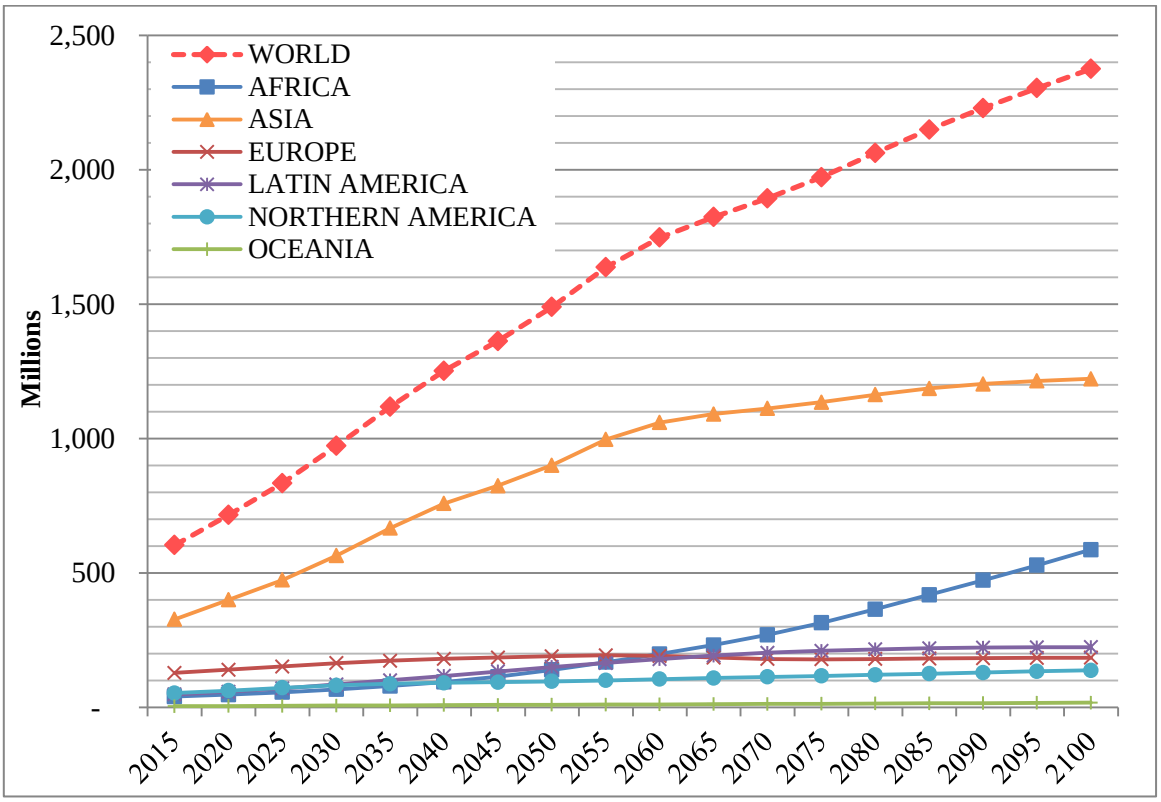

Figure 6 Size of age 65+ population in six major regions (Source: created from the UN Statistics)

2.3 Speed of Population Aging

Another important factor about population aging is the speed of aging. The United Nations defined a society with more than 7 per cent of its population being older than 65 years old as an 'aging' society, and a society with more than 14 per cent of its population being older than 65 years old as an 'aged' society. These two definitions are used as benchmarks to illustrate different stages of aging societies. However these percentages of 7 and 14 do not indicate particular conditions of society per se. Instead, these figures are used to capture the speed of aging of each country by measuring the number of years taken between these two benchmark figures. Figure 7 shows the number of years taken for doubling the proportion of age 65+ population from 7 per cent (aging society) to 14 per cent (aged society) in the selected countries. What is important to note here is that for the

case of European and North American countries, it took about a half to one century for this aging transition. For the shortest cases, Spain and the United Kingdom took 45 years while the longest case, France, took 115 years. In contrast, for Asia and South American countries, it is projected that this aging transition occurs within 20 to 30 years. Singapore particularly will go through this transition quickly within 19 years. The longest time is projected for the case of Chile, which will still be within 27 years. Generally speaking, relatively slower aging process has been observed with Europe and North American countries whereas more rapid aging process is expected with Asia and South American countries. Among those countries with rapid aging of populations, Japan is currently the only country which has completed this population aging transition as shown in Figure 7.

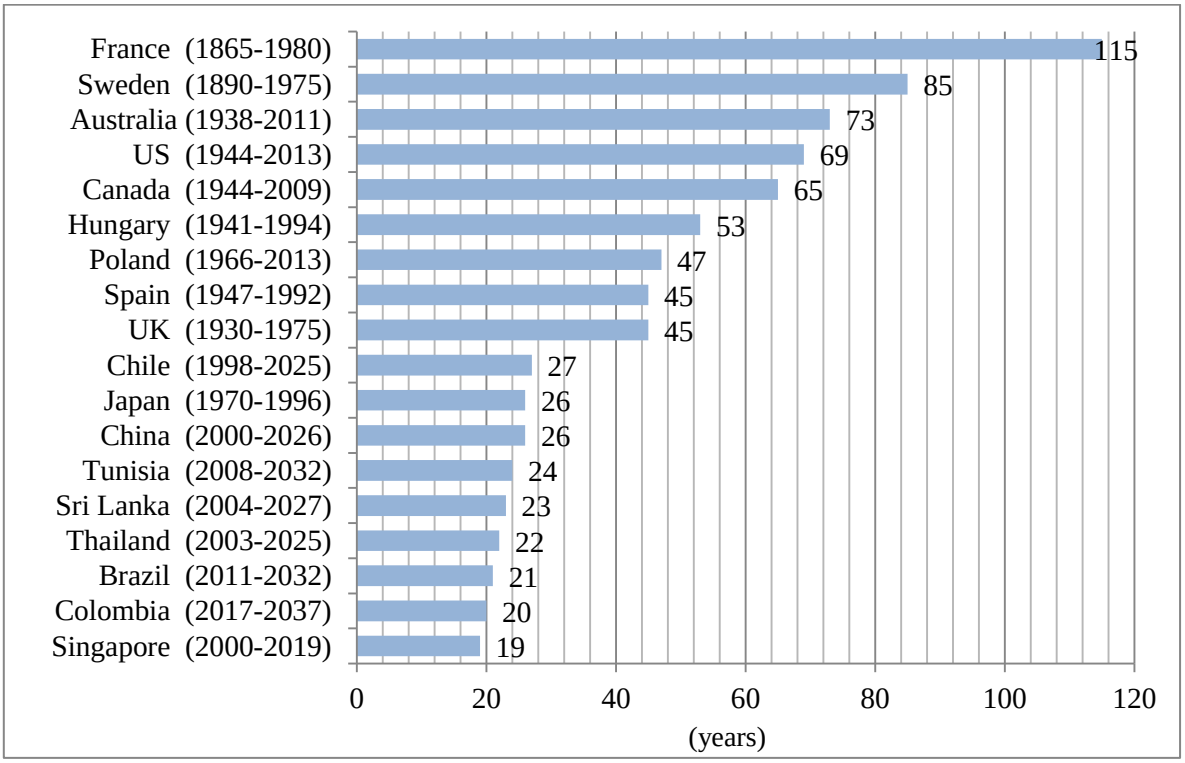

Figure 7 Number of years taken for doubling the proportion of age 65 and above population group in the selected countries (from 7 per cent to 14 per cent) (Source: created from the OECD database)

Note: Those years in brackets next to the name of county are the period of years that this aging transition happened or will happen. Note that all of Asia and South American countries except Japan have not completed this transition.

Such differences in the speed of aging can also be found with the proportions of age 65+ population. Here, the case of Europe and Asia are presented since Europe is the most aged region in the world, and Asia has the largest size of older population in the world. Figure 8 shows the proportion of older population in 11 European countries. These countries have either or both higher proportions of older population than the average figures of Europe in 2010 and 2050. Among European countries, Germany (20.8 per cent) and Italy (20.3 per cent) have the highest figures that have already passed 20 per cent by 2010. Following these two countries, Greece (19.0 per cent), Sweden (18.2), Portugal (18.0), have relatively higher figures than the average of Europe (16.3 per cent). The rest of the countries with higher than the regional average are Switzerland (16.9 per cent), France (16.8 per cent), and United Kingdom (16.6 per cent). In contrast, Poland has much lower figure at 13.5 per cent in 2010 (Figure 8).

Projected figures suggest that by 2050 there will be five countries which have higher than 30 per cent of their total populations belonging to age 65+ population in Europe. Among them, four countries are in Southern Europe, namely Greece (32.1 per cent), Italy (33.0 per cent), Portugal (34.4 per cent), Spain (34.5 per cent), and one country is in Western Europe, that is Germany (32.7 per cent). Following these countries, Poland (29.1 per cent) is expecting a higher proportion than the average of Europe (26.9 per cent). On the other hand, relatively lower proportions of older population will be found in France (25.5 per cent), Switzerland (24.4 per cent), UK (24.4 per cent) and Sweden (22.8 per cent). However, all countries in Europe will exceed 20 per cent by 2050; therefore the entire region will continue to be the most aged region in the world. Especially many countries in Southern and Western Europe will exceed the regional average by 2050.

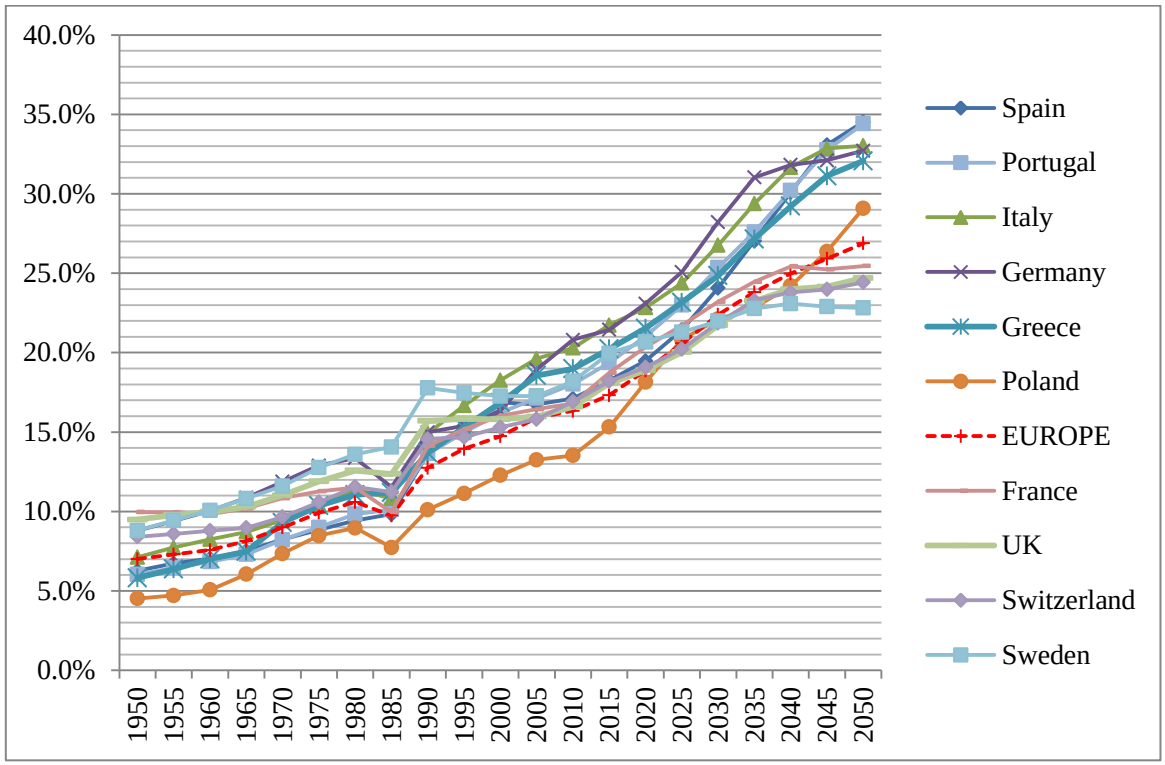

Figure 8 Proportion of age 65+ population in selected European countries (Source: created from EU Statistics)

Figure 9 shows the proportion of age 65+ population in selected Asian countries. Compared to the figures of European countries which have already surpassed 15 per cent by 2010, many of the Asian countries had less than 10 per cent of their population as older population in 2010 except the cases of Japan (23.0 per cent), Hong Kong (12.9 per cent), and South Korea (11.1 per cent).

Among all the countries, Japan started to experience the distinct increase of older population since 1985 and the country has 23.0 per cent of its population as older population in 2010. According to the predicted figures, Japan will remain as the most aged country towards the future. In the same period of time, the proportion of older population in Hong Kong and South Korea are also predicted to grow rapidly. They will surpass 30 per cent by 2040, and reach the level of Japan by 2050. Japan, Hong Kong, and South Korea

will be composed of one group of countries with the highest proportion of older population at around 35.0 per cent.

Among the rest of 6 countries, there will be other three groups of countries in terms of different proportion of age 65+ population. Thailand and Singapore will be the group with the second highest proportion of older population at around 30 per cent by 2050. In 2010, Thailand had 8.9 per cent and Singapore had 9.0 per cent of their populations as older population. These figures are expected to increase rapidly towards 2050 and they will be 28.9 per cent for Singapore and 30.4 per cent for Thailand. For these two countries, the proportion of age 65+ population will become about three times higher within the next 40 years. China and Vietnam form the third group of countries in population aging of Asia. For the case of China, the proportion of older population was 8.4 per cent in 2010 which was similar to the level of Thailand and Singapore. However, China will maintain a relatively lower proportion of older population than the second group of countries. While at the same time, the figure of Vietnam is predicted to increase rapidly from 6.6 per cent in 2010 to 23.1 per cent in 2050. Although China will always have about 3.0 per cent higher figures than Vietnam until 2045, these two countries are expected to reach around 23 per cent by 2050. From 2010 to 2050, China and Vietnam will have 15.0 per cent and 16.6 per cent of increase respectively. The last group is composed of Indonesia and India. These two countries are expecting the aging of their populations relatively later than the other Asian countries. It is predicted to start at around 2025 and it will be 15.8 per cent for Indonesia and 12.7 per cent for India by 2050. Although the proportions of age 65+ population will be lower than other groups, these two countries will have greater size of older population due to their original population sizes.

As we compare Figure 8 and 9, the aging process in Asia is going to happen at a much faster pace than Europe. For the majority of European countries, the proportion of older population has reached between 15-20 per cent by 2010, while it remained around 10 per cent for Asian countries. From this level, the first and second groups of Asian countries

will reach the level of Europe's regional average (26.9 per cent) or above by 2050. This point indicates that the aging is happening at a much faster pace in Asia than Europe.

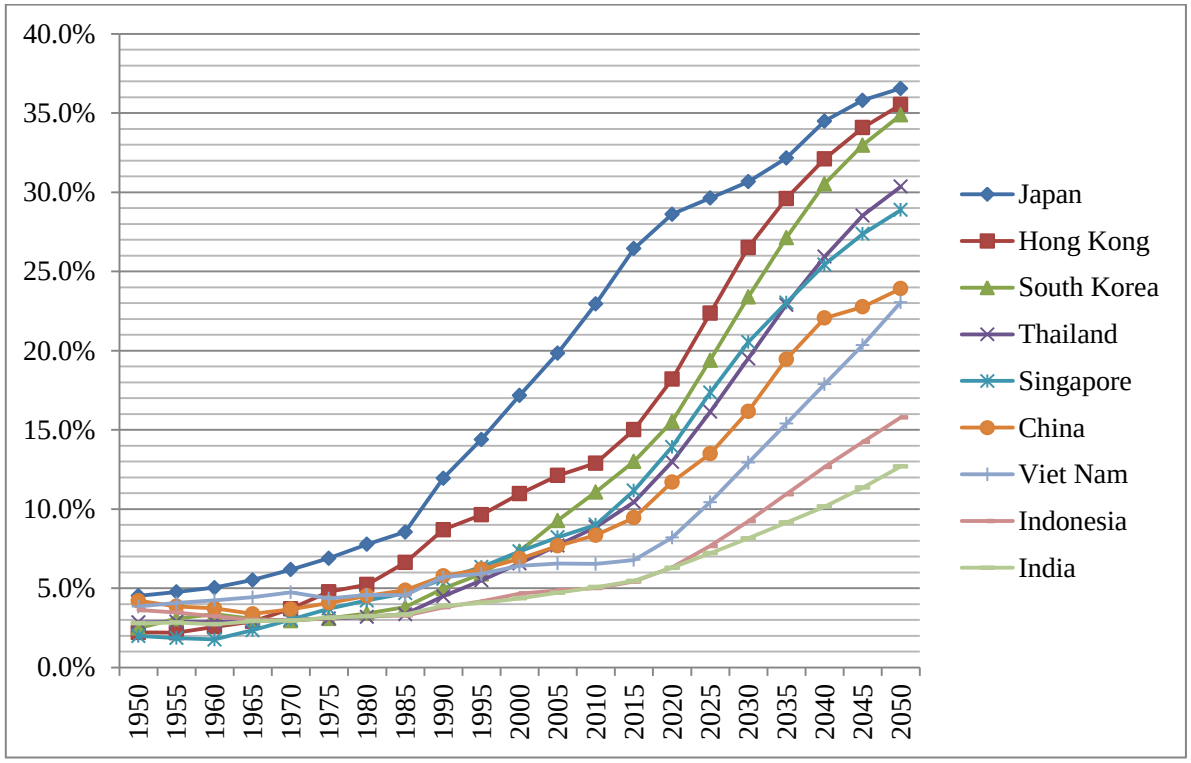

Figure 9 Proportion of age 65+ population in selected Asian countries (Source: created from the UN Statistics)

2.4. Regional Difference in Aging Process between Urban and Rural Areas

Along with the analysis of demographic changes at the national scale, it is also important to examine the difference between urban and rural areas as it is often the case that population aging appears greatly in rural areas than urban areas. Figure 10 shows old-age dependency ratio (the number of age 65+ persons in every one hundred of age 15-64 persons) in the selected OECD countries. This ratio describes the proportion of older people to working population in a given society (United Nations, 2002). Among all the countries, Japan has the highest figure at 38.4 per cent for its national average and 46.3 per cent for its

rural areas. Portugal (41.1 per cent), France (34.7 per cent), Sweden (34.7 per cent), Italy (32.7 per cent), Germany (32.6 per cent), Greece (32.0 per cent), United Kingdom (31.8 per cent), Spain (31.2 per cent), Canada (25.5 per cent), South Korea (25.1 per cent), and Australia (39.6 per cent) also have distinctively higher figures for their rural areas. South Korea especially shows 12 per cent higher rate for its rural areas than urban areas. Poland has its unique figure of higher old-age dependency ratio in urban areas compared to its rural counterpart.

In Europe, aging appears at a greater degree in rural areas due to two major reasons; the first reason is general rural economic decline that induces the outflow of young population from rural areas, and the second reason is that the attractiveness of rural areas in terms of its economic, environmental and social roles that have recognized more preferable living environment for older population either after their retirement (Camarero & Pino, 2013). In contrast, for the case of Japan, the degree of rural migration remains low, therefore the total size of rural population has been declining (Cabinet Office of Japan, 2014; Nihon sousei kaigi, 2014). Since such outflow of population from rural areas are largely concentrated in younger population, the proportion of older population naturally higher in rural areas.

In summary, population aging is more pronounced in rural areas across developed countries and examination of such new demographic trends needs to be studied in order to capture the impact of population aging to their regional societies.

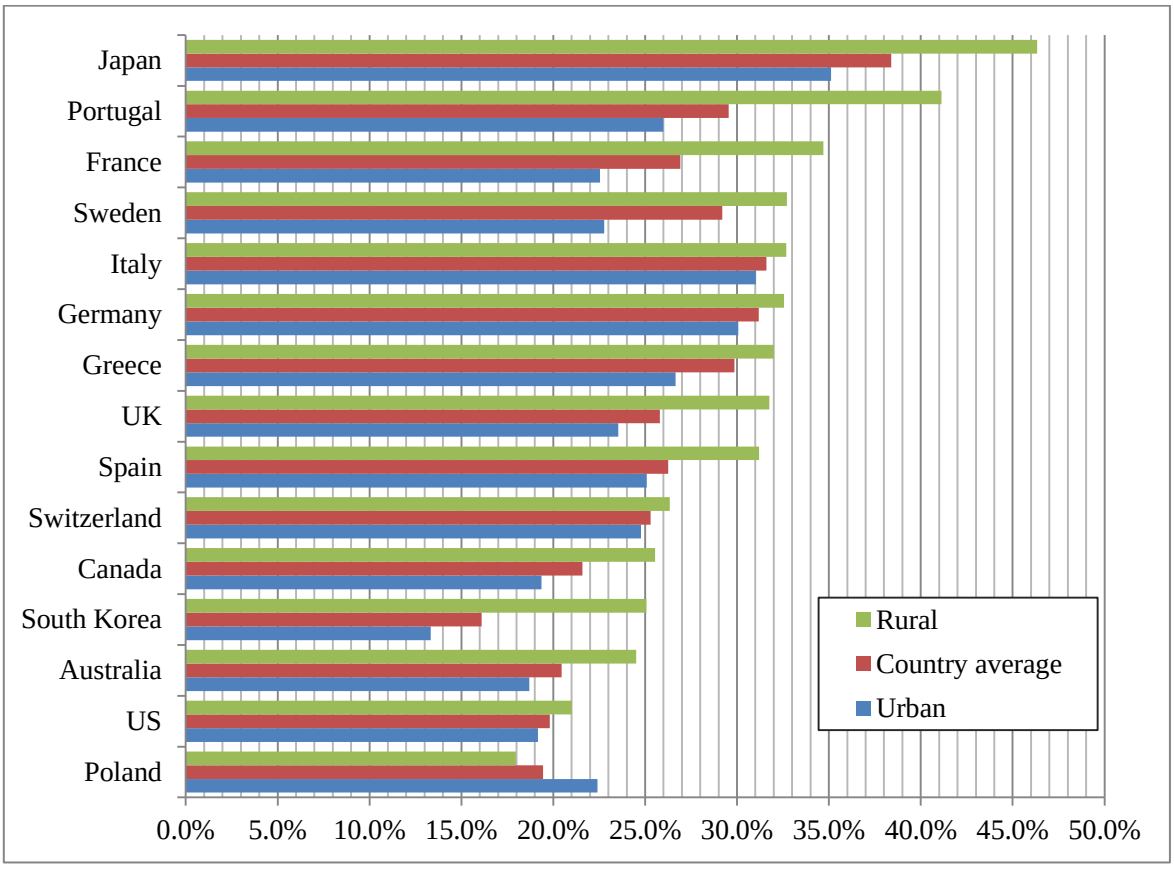

Figure 10 Urban-rural differences in old-age dependency ratio among OECD countries (Source: created from the OECD Statistics)

Note: Old-age dependency ratio is the proportion of age 65+ population over age 15-64 population

2.5. Aging and Shrinking Japan

In 2012, 24.1 per cent of the total population of Japan was older population and this is the highest among all the countries. As Figure 7 shows, the proportion of older population in Japan became doubled, from 7 per cent to 14 per cent, within 26 years between 1970 and 1996, which is more than twice faster than many of European countries. Knowing many Asian countries will face population aging and related social challenges in coming decades, Japan could be an important reference case as it is the only country which has experienced rapid aging of her society. Population aging in Japan is predicted to grow further and the proportion of age 65+ population will increase to 30.0 per cent by 2030 and

become 36.5 per cent by 2050. Based on the prediction by the National Institute of Population and Social Security Research (IPSS), this figure is projected be about 3.0 per cent higher than the prediction by the United Nations, at 39.6 per cent by 2050. In 2050, it is expected that about 4 persons in every 10 Japanese residents will be older than 65 years old. By referring to such an unprecedented situation with high proportion of older population, Japan is often referred as a "super-aging" (Muramatsu & Akiyama, 2011) or "hyper-aging" society (Atoh, 2000; Hewitt, 2003).

In terms of the actual size of older population, there were 30.8 million people who are older than 65 years old in 2012 (Cabinet Office of Japan, 2013). Among them, there were 13.2 million male and 17.6 million female populations. Within age 65+ population, those who are in 65~74 years old are 15.6 million (12.2 per cent of total population) and those who are aged 75 and above are 15.2 million (11.9 per cent of total population).

Today, Japanese people enjoy one of the longest life expectancy at birth which is 80.21 years for male and 86.61 years for female. At the same time, similar to the case of many other developed countries, TFR of Japan has dropped from 3.65 children per woman in 1950 to 1.39 in 2010. The combinations of these two demographic changes have partly made Japanese society aged. However there are two other important demographic changes that brings Japan to be an important case study for aging society phenomenon, which are i) shrinking population and ii) aging in rural areas.

Currently Japanese society is in a long-term phase of shrinking population (Eberstadt, 2012). This depopulation of Japan has been caused by i) decline of total mortality, and ii) decline in the number of births (Furuta, 2003). Around 2005, the total mortality has outnumbered the total birth in Japan. In 2006, there was a slight increase in the total number of birth, hence the total population turned to a natural increase. However, Japanese society has entered the long-term phase of natural decrease from 2007. This shrinking trend in the total population of Japan is well captured in Figure 11. The total population of Japan was 84.1 million people in 1950. It exceeded 90 million by 1960, and grew up to 127 million by around 2005 which was the peak of Japanese population, then

2008 and onwards; the total population has started to decline (Senno, 2008). The long-term projection by the National Institute of Population and Social Security Researches (IPSS) suggests a drastic decline of the population towards 2050. The total population will become smaller than 120 million by 2025, and will further decline to 95.2 million by 2050 which implies about 25 per cent shrinkage of total population in the coming four decades.

Figure 11 also shows the proportions of three age groups. In the past, the total share of age 65+ population group in Japan was only around 5 per cent. Later it increased to 7 per cent by 1970, and it quickly reached 14 per cent by 1994. This figure is in a long trend of increase and today it has reached 24.1 per cent. In 2000, the proportion of age 65+ population became larger than the proportion of age 0-14 population. It is projected the share of older population will increase steadily into the future as the total size of population becomes smaller. It will surpass 30 per cent by 2030 at 30.5 per cent and will get close to 40 per cent in 2050 at 39.6 per cent.

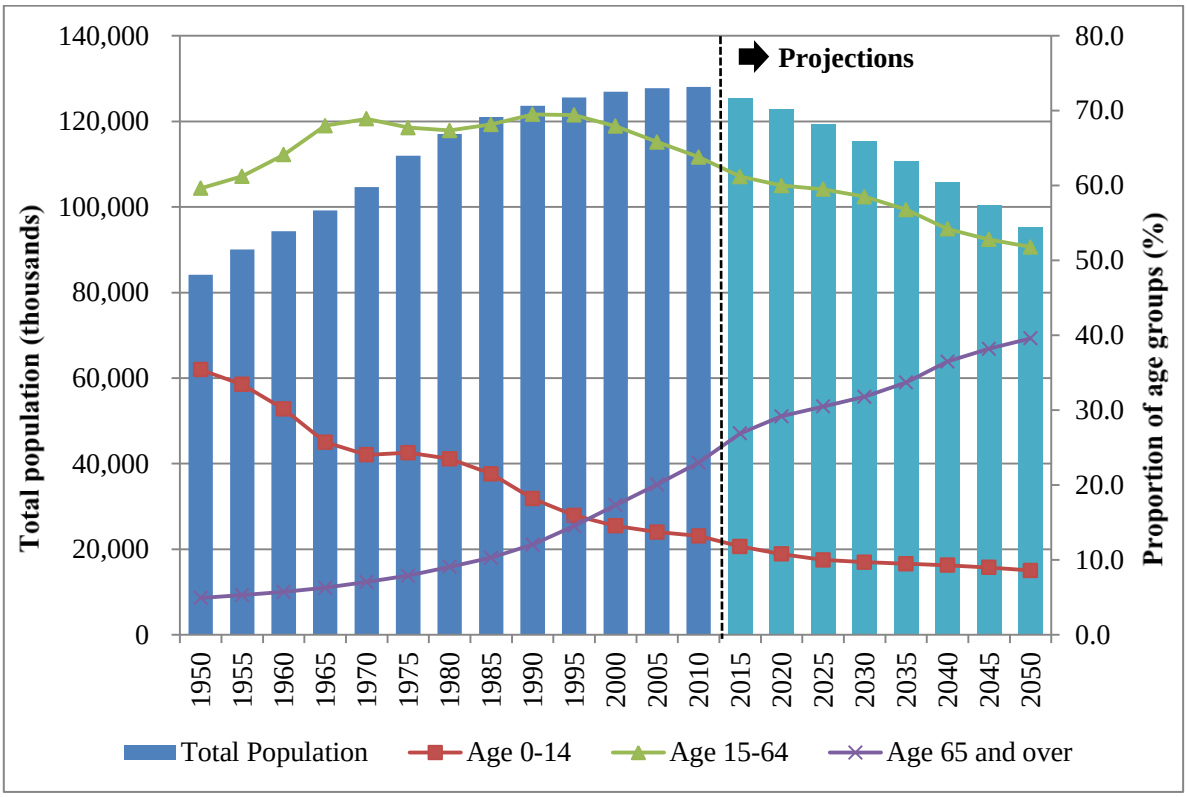

Figure 11 Total population of Japan and shares of three age groups from 1950 to 2050 (Source: created based on the National Census of Japan in 2010 and the medium variant projections by the IPSS)

Note: Figures for the proportion of three aged groups appear slightly higher than the predictions by the United Nations.

2.6. Regional context inside of Japan: Rapidly shrinking rural areas

Figure 12 shows population growth rates between two recent national censuses at prefectural level. Among all 47 prefectures, there were 10 prefectures that maintained positive population growth rates. These 10 prefectures are largely the locations of metropolitan cities such as Tokyo, Osaka, and Nagoya and their neighboring areas. Okinawa and Shiga prefectures traditionally have higher fertility rate at around 1.90 births per woman.

There were five prefectures that had positive population growth rate in 2000-2005, but have turned to negative population growth in 2005-2010. They are Kyoto, Tochigi,

Okayama, Mie, and Shizuoka prefectures. Especially Shizuoka had +0.7 per cent population growth in 2000-2005 census time which was as high as other major cities, however it turned to -0.7 per cent growth for the 2005-2010 census.

The rest of 32 prefectures have been in a trend of negative population growth since 2000. Particularly the lowest population growth was observed in Akita (-5.2 per cent) and Aomori (-4.4 per cent). These two prefectures had lower than -4.0 per cent in 2005-2010, and Akita was the only prefecture which had lower than -5.0 per cent.

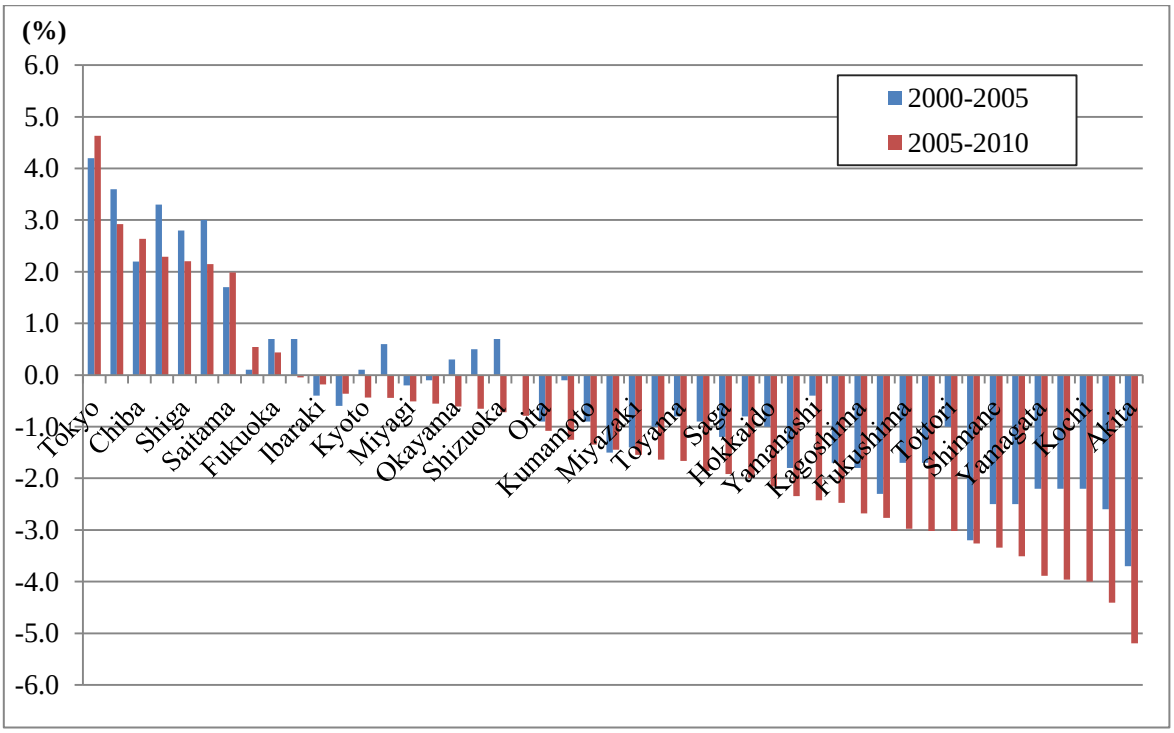

Figure 12 Population growth rate between two national census time (2000-2005, 2005-2010) at prefectural level (Source: modified from Long-term outlook by MLIT, 2010)

As the depopulation is happening unevenly, aging of population is also more pronounced in certain prefectures in Japan. Table 1 shows the proportion of age 65+ population in 47 prefectures both in 2010 and 2040. Projections for year 2040 are applied

here since they are the latest and most long-term projections available at prefectural level at this moment. The first point to be noted is that Akita will remain as the prefecture with the highest proportion of age 65+ populations at 48.3 per cent in 2040, which is 13.7 per cent higher than the national average. Although having a higher proportion of older population does not directly imply that one prefecture is facing severer conditions than others, it can be said that the challenges people face in Akita will provide valuable inputs to the approaches for aging society particularly at regional society and local community scales. Together with Akita, Aomori, Tokushima and Kochi will have higher than 40 per cent of their population older than 65 years old. These prefectures can also be seen as important study areas to gain better understanding on aging society, particularly in rural settings.

At the regional scale, prefectures in Tohoku, Chugoku and Shikoku regions have relatively higher ratio of older population than the national average at around 38~40 per cent. In the case of Tohoku region particularly, five out of six prefectures will have higher than or as high as 40 per cent of older population. Similar trends are also found in Chugoku and Shikoku regions. Hiroshima and Okayama will maintain lower figures than the national average. However, the rest of the prefectures in these two regions will have around 38~40 per cent of their populations as older population. In contrast, Kanto and Kinki regions will remain at the average or lower levels as the national average compared to the other regions with exceptions of Nara and Wakayama prefectures. In 2010, those prefectures with major cities had relatively lower ratio than the national average. This trend will be maintained in 2040 as well especially Tokyo (33.5 per cent) and Aichi (32.4 per cent) will have about 2.5~3.0 per cent lower figures than the national average. Among them, Osaka will have relatively higher figure at 36.0 per cent which is almost same rate as the national average.

In summary, there are certain prefectures which are more affected by depopulation and aging of residents than their urban counterparts. More specifically, those prefectures in Tohoku, Chugoku and Shikoku regions are experiencing higher degree of aging society phenomenon. The following section discusses the impact of population aging at the rural communities where the influence of aging as well as shrinking population have appeared

not only as demographic changes but also in diverse forms of local challenges that are more directly related to the daily lives of residents.

Table 1 Proportion of age 65+ population in 2010 and 2040 at prefectural level

	2010	*2040*
National average	23.0	36.1
Hokkaido		
Hokkaido	24.7	40.7
Tohoku		
Aomori	25.8	41.5
Iwate	27.2	39.7
Miyagi	22.3	36.2
Akita	29.6	43.8
Yamagata	27.6	39.3
Fukushima	25.0	39.3
Kanto		
Kita-Kanto		
Ibaraki	22.5	36.4
Tochigi	22.0	36.3
Gumma	23.6	36.6
Minami-Kanto		
Saitama	20.4	34.9
Chiba	21.5	36.5
Tokyo	20.4	33.5
Kanagawa	20.2	35.0
Chubu		
Niigata	26.3	38.7
Toyama	26.2	38.4
Ishikawa	23.7	36.0
Fukui	25.2	37.5
Yamanashi	24.6	38.8
Nagano	26.5	38.4
Gifu	24.1	36.2
Shizuoka	23.8	37.0
Aichi	20.3	32.4

	2010	*2040*
Kinki		
Mie	24.3	36.0
Shiga	20.7	32.8
Kyoto	23.4	36.4
Osaka	22.4	36.0
Hyogo	23.1	36.4
Nara	24.0	38.1
Wakayama	27.3	39.9
Chugoku		
Tottori	26.3	38.2
Shimane	29.1	39.1
Okayama	25.1	34.8
Hiroshima	23.9	36.1
Yamaguchi	28.0	38.3
Shikoku		
Tokushima	27.0	40.2
Kagawa	25.8	37.9
Ehime	26.6	38.7
Kochi	28.8	40.9
Kyushu		
Fukuoka	22.3	35.3
Saga	24.6	35.5
Nagasaki	26.0	39.3
Kumamoto	25.6	36.4
Oita	26.6	36.7
Miyazaki	25.8	37.0
Kagoshima	26.5	37.5
Okinawa		
Okinawa	17.4	30.3

(Source: created from the National Census of Japan 2010 and the demographic predictions by the National Institute of Population and Social Security Research)

2.7. Summary

This chapter looked at the evidence of population aging by demographic data at the global, regional, and national scales. Two types of aging societies were identified between Europe and Asia regions, which are slowly aging societies and rapidly aging societies. Further details of demographic factors, namely total fertility rate, life expectancy at birth and later life, old-age dependency, were reviewed at regional and national scales. The case of Japan is introduced as an advanced case of rapidly aging society and such demographic change is particularly evident in rural areas of the country. The regional difference of demographic trends was also reviewed and the higher proportions of older populations as well as negative population growth rates were found in rural areas. Overall, this chapter covered a set of demographic trends behind the recent aging society phenomenon. This chapter also provided the evidence of the greater degree of population aging in rural areas of Japan.

3. MULTIFUNCTIONALITY FRAMEWORK

The core challenge for those rural areas where rapid aging and depopulation are consistently present is to establish a local system that can cope with various functional declines at the community scale. A conduct of analysis on the impact of social changes at this scale is important as this is the scale at which local residents experience a series of changes and organize responses (Holmes, 2006; Wilson, 2010). Since aging of communities are changing the quality of rural areas, a more holistic approach is required to analyze the entire rural areas rather than addressing each topic separately. In this respect, application of a comprehensive conceptual framework would be beneficial to discuss possible future directions for rural areas. There are several researches who discuss quality changes in rural areas from the perspectives of rural transformation (Amcoff & Westholm, 2007; Ilbery, 1998) and urban-rural interaction (Caffyn & Dahlström, 2005; Dabson, 2007; Phillipson & Scharf, 2005; Silverstein, Cong, & Li, 2006; Tacoli, 1998). Drawing upon such holistic approaches, this research applies multifunctionality framework to elaborate a discussion on both past and future transition of rural areas. The objective of this chapter is to introduce the multifunctionality discourse and also to justify its application as the analytical framework for this dissertation.

3.1 Social Perception of Rural Areas

Rural areas have been the target of numerous agriculture and development policies that have emerged as responses to wider social changes such as rapid economic growth, globalization of the market, and recent environmental challenges. Early changes in agriculture and rural policies can be particularly well explained with the case of Europe in 1950s to mid-1980s, which may be characterized as continuous modernization and industrialization of agricultural sector. Such transition can be described as a shift from productivist paradigm to post-productivist paradigm (or arguably non-productivist paradigm) in agriculture and rural development policies (Lowe, Murdoch, Marsden, Munton, & Flynn, 1993; Wilson, 2010). As Gibson et al (2009) noted, "How a rural change is described and explained shapes how the future is imagined and has the potential to

constrain or open up possibilities for local development". Hence, a review of past transformation of rural areas is critical for an adequate interpretation of rural transformation in today's society (Gibson et al., 2010).

The main focus of the productivist paradigm is to increase agricultural outputs in order to secure the quantity of food production and increase the market competitiveness of agricultural sector. Such a focus on the outputs can also be understood as a general trend during the post war period when food security became a general concern of countries. Ilbery and Bowler (1998) argued that the orientation of the productivist paradigm during this period could be classified in terms of three strategic approaches – namely, commercialization, commoditization, and industrialization (Ilbery, 1998). These three approaches of productivist paradigm drove rural areas into a space for intensified agricultural industry.

The post-productivist paradigm, in contrast, places its emphasis on broader rural economic and environmental concerns (Shucksmith, 1993). This paradigm was promoted by three regional and international policy frameworks for agriculture, which were (i) the reformed scheme of Common Agricultural Policy (CAP) by European Union, (ii) the GATT agreement in 1993 at world agricultural trade, and (iii) the Agenda 21 adopted at the Earth Summit in 1992. They all intended to raise awareness about the multiple outputs and services of agriculture and related activities in rural areas.

In line with the perspective of rural areas based on post-productivist paradigm, the notion of multifunctionality has emerged initially as multifunctionality of agriculture (or multifunctional agriculture). The main idea of multifunctionality of agriculture and rural areas is that agricultural activities, and more broadly the local activities in rural areas, have additional functions and outputs that can respond to wider social expectations such as environmental concerns through landscape management, wildlife and biodiversity protection, and water quality control, and social demands of the countryside through the amenity uses of rural environment aside from their primary roles for food and fiber production (FAO, 1999; Holmes, 2006; Huylenbroeck et al., 2007; Marsden & Sonnino,

2008; Meert, Van Huylenbroeck, Vernimmen, Bourgeois, & van Hecke, 2005; OECD, 2001; Wilson, 2008, 2010). Those additional outputs of agriculture and other activities in rural areas are well summarized by OECD (2001) and Huylenbroeck et al (2007) into four types of functions labeled by different colors. The first is green function that contributes to land management, including wild life and biodiversity protection. This function is widely recognized in preserving the countryside landscape. The second function is labeled as blue which is related to water and wind resources. Farming activities contribute directly or indirectly to the improvements of water quality and flood control in rural areas. In addition, blue function can be found in energy generation through hydro and wind powers. The third classification is on yellow services that contribute to socio-cultural dimension of wider rural areas. Such services increase cohesion and vitality of rural societies by sustaining cultural and historical assets of the area. This yellow function is also well interlinked with green function in the form of cultural landscape. The fourth classification is white function that delivers food security and safety which affect much wider societies. This function defines the social importance of rural areas as a place for food production which is a conventional perspective for rural areas. These four different types of functions are recognized as positive attributes of agriculture and rural activities more in the conventional definition of multifunctionality of agriculture (FAO, 1999; Huylenbroeck et al., 2007; OECD, 2001). In the recent discussions of multifunctionality, more multidimensional interpretations are preferred (Holmes, 2006; Marsden & Sonnino, 2008; Renting et al., 2009; Wilson, 2008, 2010) and those external outputs and functions via a wilder rural activities are integrated into the concept reflecting the increasing awareness of environment protection and social demands for utilizing amenity or authentic values of the countryside (Jongeneel, Polman, & Slangen, 2008; OECD, 2001, 2003).

3.2 Policy Makers' Adaptation of Multifunctionality Concept

The notion of multifunctionality of agriculture and rural areas has been used by policymakers since early 1990s. At the international level, the idea of multifunctional agriculture was widely diffused by the Agenda 21, at the Rio Earth Summit in 1992

(UNCED, 1992). This document stated sustainable development as a global response to the expected population expansion and upfront development challenges of the world. Chapter 14 of Agenda 21 reiterated agriculture and rural development as one of the most important goals within sustainable development, and emphasized the multifunctional outputs of agriculture in relation to food security and safety. Agenda 21 was the initial global agreement for the promotion of multifunctionality of agriculture.

Following the initiation at the international level by the United Nations, OECD expressed its engagement to multifunctional agriculture in the Declaration of the Agricultural Ministers Committee in 1993 (OECD, 2001). The declaration stated that agricultural activities could support landscape, natural resource, and biodiversity management, and these functions foster the socio-economic development of rural areas (Huylenbroeck et al., 2007) by stating "agriculture is multifunctional when it has one or several functions in addition to its primary role of producing food and fiber" (Maier & Shobayashi, 2001). Along with the engagement of OECD, the concept of multifunctional agriculture was well spread to the world.

At the regional scale, the multifunctional agriculture was well integrated in European agriculture and rural policies as the notion of multifunctionality became influential in the international trade discussions (Potter & Tilzey, 2007). The word “multifunctionality” appeared as a political term in the European Council for Agricultural Law in 1993 and the Cork Declaration in 1996 articulated the European Union’s commitment to the notion of multifunctional agriculture (Losch, 2004). The declaration recognized farming as a key engagement means of human being with natural environment and it also set farmers as the stewards for natural resource conservation in rural areas (Gorman, Mannion, Kinsella, & Bogue, 2001). This line of discussion in multifunctional agriculture has provided a solid justification for policy-makers to provide subsidies particularly to those small scale farmers in remote areas since their operations contributed to the landscape management of the areas. This view of multifunctional agriculture in

Europe is standing upon the idea of nature conservation and emphasizing positive externalities of farming that contribute to sustaining rural environment.

The actual practice of multifunctional agriculture can be found, most notably, in the evolvement of the Common Agricultural Policy (CAP) of the European Union (EU). The primary objective of CAP was to increase agricultural productivity of farmers in order to deal with the food security of Europe. For this purpose, CAP initiated the market management from early 1960s to 1990s in which the set prices were applied to agricultural products by EU administrative. This institutional pricing intervention by the regional state control brought a major burden for EU during 1980s as it created a situation in which EU authorities needed to purchase the excess production at fixed price when the size of production successfully increased from technical advancement that lowered production costs (Bureau et al., 2012). In order to reduce the financial burden on EU caused by the management of surplus production, a reform of CAP was made in early 1990s in which its principle shifted from the institutional pricing to the market-oriented and less trade-distorting approaches. By this reform, CAP aimed to reduce farmers' dependency on public sector support and strengthening the agricultural sector towards the global market competition. Within this new scheme, multifunctional agriculture was considered as a strategy to encourage small scale farmers to be entrepreneurial and also to regain their identities and roles as farmers within the EU society (Morgan, Marsden, Miele, & Morley, 2010).

CAP has gone through another phase of reforms since 2010 in which its focus is more directed to land-based approach that corresponds to the post-productivist paradigm, and further shift to the socioeconomic challenges of rural areas based on the sustainable development paradigm. This shift is due to the emerging challenges that rural areas are facing today. Such challenges are classified as economic, environmental and territorial challenges (Bureau et al., 2012). The economic challenges are declining productivity growth, price fluctuation of products, and increase in production costs. The environmental challenges are resource efficiency, soil and water quality issues, and increasing threats to

wildlife and biodiversity loss. Territorial challenges are linked to socioeconomic dimension of rural areas such as the recent demographic transitions, more specifically the out-migration of young population and aging of rural populations, declines of local businesses, and difficulty to maintain the viability of rural communities due to the loss of historical and cultural assets. Behind this recent CAP reform implementation, there has been an increasing pressure on the price of agricultural commodities in Europe due to the competition with import products, therefore the idea of multifunctional agriculture is introduced to secure the number of farmers who contribute to the protection of landscape and cultural values of countryside (Abler, 2004). This is particularly an urgent challenge as there is a recent trend of decline in the number of farmers (Breustedt & Glauben, 2007; Glauben, Tietje, & Weiss, 2006) and signs of land abandonment in Europe (Andersen, Vejre, Dalgaard, & Brandt, 2013; Selman, 2009). Moreover, today's CAP has its target in securing a fair living standards for farmers who provide food security and safety to the society and also act as managers of countryside environment (Katsarova, 2013). This evolvement of new CAP scheme can be interpreted as a shift of its vision from the production with adjusted market mechanism to the securing of fair product prices for producers by providing income support and other safety net mechanisms (European Commission, 2013).

As it is well illustrated in the history of CAP reforms, the scope of multifunctionality has been expanding and becoming more inclusive. The idea of multifunctionality is transformed to an important concept for rural development. Accordingly, evaluation schemes for individual policy practices are required in order to accurately appraise outputs of multifunctionality (Dialy et al., 2000). Such evaluation schemes substantially have led to a conceptual discussion of multifunctionality itself.

3.3 Conceptual Development of Multifunctionality

The main idea of multifunctionality, recognizing additional functions of agriculture and other local activities in rural areas that produce positive outputs for local environment and wider society, has received a wide range of agreement both from policy makers and

scholars However, its conceptual development has been diverted and its definition is becoming increasingly blurred (Andersen et al., 2013; Renting et al., 2009). In many policy-related cases, its definition has been set individually depending on the purpose of each claim. For this point, Marsden and Sonnino (2008) and Van Huylenbroeck et al (2007) have provided a comprehensive review on different interpretations of multifunctionality discourse and classified them into three groups (Huylenbroeck et al., 2007; Marsden & Sonnino, 2008).

The first interpretation of multifunctionality is based on the productivist paradigm which has emerged from a neo-liberalist view of the globalized agricultural market. It realizes the vertical logic and specialization adjusted to the globalized market. Multifunctionality in this vision implies the production of multiple outputs from the original inputs provided by primary agricultural production. Such outputs may come in a complementary form to its primary product outputs (Havlik, 2005). In this respect, the multifunctional character in this view is limited to the idea of pluriactivity that is formed by agricultural and non-agricultural incomes of farming households (Holmes, 2006; Marsden & Sonnino, 2008). In the productivist paradigm, there is a clear separation of individual farming households and the entire agro-food industry; hence multifunctionality within this paradigm is seen as the survival strategy of individual farming households in the global market which has been competitive. As a response to such harsh market circumstances, individual farmers are performing multifunctional agriculture as their coping strategy to keep up with the competition in the market.

The second interpretation of multifunctionality is based on post-productivist paradigm which focuses on the space of rural areas rather than the production activities. While the productivist paradigm based interpretations discuss about individual farmers as being pluriactive in their production as a coping strategy to the global market, this second interpretation conceives the entire rural areas as the consumptive area not only for industrial-based capital but also for the amenity demands through such means as eco-tourism, experiencing of farm activities, and using of rural space for educational purposes

(Barbieri & Valdivia, 2010; Huylenbroeck et al., 2007; Marsden & Sonnino, 2008; Potter & Tilzey, 2005). One important stakeholder group in this view is non-rural (or urban) population who finds authentic and leisure values in rural space. Echoing such normative values of rural areas, post-productivist view emphasizes environmental protection. Based on this perspective, agriculture is perceived not only as a means of food and fiber production but also as a means of maintaining the local environment of the countryside. Between the first and second interpretations of multifunctionality, the conceptual focus shifts from farm-based approach to space-based approach through emphasizing the nature and landscape values of rural areas. In other words, this shift from productivist paradigm to post-productivist paradigm enriches the focal boundary of multifunctionality.

The third view of the multifunctionality takes further expansion within its scope from post-productivist paradigm to sustainable development paradigm. This third view of multifunctionality takes a holistic interpretation of the concept to realize the connection between socio-environmental benefits from farming operations and the local demands of rural societies (Marsden & Sonnino, 2008). In this view, multifunctionality is seen as a critical assessment tool for rural development. In contrast to the previous two paradigms in which the social meanings of rural areas are determined by the external interests (e.g. food security concerns, competitive agricultural sector, and environmental protections), this third view interprets multifunctionality as an inclusive development paradigm that takes the socio-economic state of rural areas into account (Marsden & Sonnino, 2008; Morgan et al., 2010). It is also important to note that agriculture is seen as one of the characteristics of rural area in this third view. Since the notion of multifunctionality was initially developed in agricultural policies, the multifunctionality discourse has placed its centrality on agriculture and other dimensions of rural areas have taken as complementary factors. However, such focused view on multifunctionality hinders the idea to capture the dynamic changes of rural areas. In fact, agriculture is no longer the backbone of rural economy today as its share has been declining (Huylenbroeck et al., 2007; Milestad & Björklund, 2008). In addition, due to such decline of local economy, there is a trend of outward migration of

young population in search for better employment opportunities (Klijin et al., 2005; Paul Milbourne & Doheny, 2012).

In order to reflect the reality of rural areas today, this research follows the recent discussions of multifunctionality developed by the work of Holms (2006), Marsden and Sonnino (2008), Renting et al (2009) and Wilson (2008, 2010a) and others. In this research, multifunctionality is considered as a holistic conceptual framework that can capture the quality changes of rural areas over time as it undergoes a series of social changes. The applied multifunctionality framework in this study is based on the recent works of Wilson (2008, 2010) which addresses the normative discussion on the quality of multifunctionality.

Among the previous empirical studies on multifunctional agriculture, the unit of analysis was commonly individual farms and they evaluated the types of operations which contributed to the multifunctional quality of farmers. These studies also commonly set their objectives to quantify multifunctionality of individual farms by applying a set of parameters for measurement (Andersen et al., 2013; Morgan et al., 2010). However, there was always a point of contention about how to select an adequate set of parameters to examine the multifunctionality of target unit quantitatively as the concept of multifunctionality is by no means "clearly and uniformly conceptualized or understood" (Marsden & Sonnino, 2008). This challenge would particularly stand out if a study includes the time-scale since the required set of parameters would be different according to the socioeconomic state of rural areas at the particular time. In addition, the impact of external factors would affect the state of rural areas. For example, the state of rural areas before and after the arrival of the impact of globalization of the market system should be considerably different.

3.4. Concept to an Analytical Framework: Scaled Up Interpretations of Multifunctionality

As it was illustrated in the review section, the notion of multifunctionality has been developed from an approach focused solely on agriculture to an inclusive concept for rural development (Bajayo, 2012; Berkes & Ross, 2012; Cutter et al., 2008; Magis, 2010; Wilson,

2012b, 2012c). This conceptual evolvement was found in the three paradigms (productivist, post-productivist, and sustainable development) as their main focus shifted from farm operations to rural space, and to the entire rural areas which include all types of activities in rural areas. Reflecting the shifts of paradigms over time, the quality of rural system also illustrates particular transitions. Based on such transition, rural areas possess different qualities of multifunctionality. Base on this idea, Wilson's work proposes to apply three types of capitals, economic, environmental and social capitals, as a set of descriptive dimensions to capture different quality of rural areas (Wilson, 2008, 2010, 2012a). He argues that when the balance of three capitals is well kept (well-balanced state in Figure 13), the state of a rural area becomes more stable and it can achieve its self-sustaining capacity. This is owing to the balanced endowment of three capitals and actual contribution of these capitals for producing outputs and services in a rural system. In fact, as Wilson also supports, many of rural communities emerged as subsistence farming communities in which three types of capitals need to be well developed and balanced in order to have a good self-managing capacity for food production, local resource management, and facilitation of minimum exchanges with outside communities.

Capturing the quality of target system by the application of different sets of indicators has attracted a great deal of research interests across disciplines (Bell & Morse, 2008; Morse, 2010; OECD, 2004; Rametsteiner, Pülzl, Alkan-Olsson, & Frederiksen, 2011; Stevens, 2005). Among those studies which adopted a set of capitals, Wilson's papers provide a solid discussion in studying multifunctionality of rural system with the application of three types of capitals (Wilson, 2008, 2010). He refers to Bourdieu (1984) to substantiate the application of capital notion in which Bourdieu situated capitals in three fundamental guises; they are economic (material property), social (networks of social connections and mutual obligations), and cultural (prestige) capitals. In Bourdieu's theory, the notion of capital is used more as a metaphor or description of processes as individuals or groups gain or lose different types of capitals through interactions. Following the approach of Wilson and Bourdieu, this study considers the notion of multifunctionality as a metaphor to capture the system change qualitatively.

Once any concentration on a particular capital is created due to the influence of wider social changes (e.g. rapid economic growth and industrialization) or internal changes (e.g. demographic changes), the composition of three capitals could be affected. In case the activities in economic capital is emphasized, and as it is often the case, through an industrial change from agriculture-based production to manufacturing, the quality of rural system shifts towards the state of super-productivism which is a state of extremely pronounced economic capital. In such a situation, the entire rural system often loses the balance with social and environmental capitals and the share of economic capital becomes greater largely because the system gets influenced by national economy and globalized market as well as rural policies by the central government (Economic oriented state in Figure 13). At another occasion, when the environmental concerns on rural environment are realized by certain rural policies oriented to post-productivist paradigm (e.g. recent CAP), the quality of rural system moves towards non-productivism (environmental protection) direction and the environmental capital gains a considerable attention (Environmental oriented state in Figure 13). If sustainable development paradigm functions properly as an inclusive rural development scheme, then sufficient approach to social capital of local communities should be taken; ideally this approach should bring a rural area into well-balanced state in Figure 13.

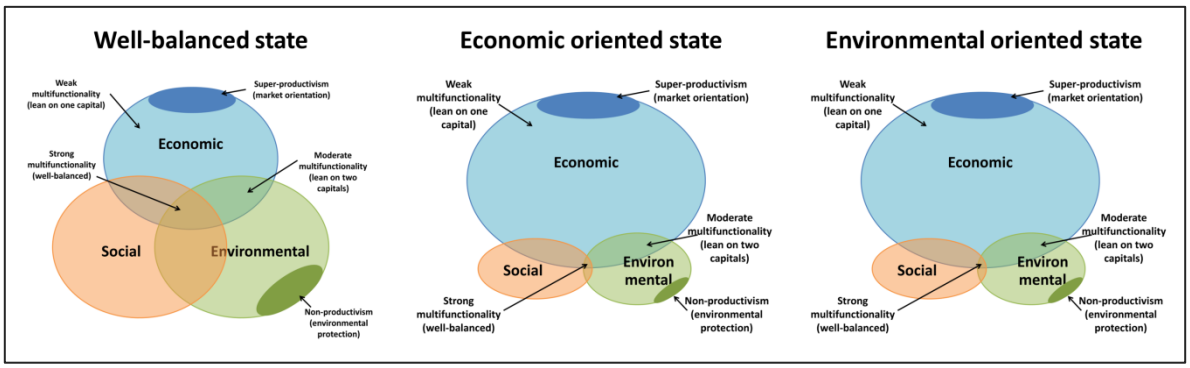

Figure 13 Illustrations of different quality of multifunctionality based on economic, social and environmental capitals (Source: modified from Wilson 2010)

Figure 14 shows the inter-temporal changes of a rural system based on different quality of multifunctionality. The images of Venn diagrams, which represent different compositions of three types of capitals, are added to represent possible configurations of three capitals that describe each state of rural transformation. The figure depicts two states of rural system in the past and possible future pathways from the present moment. The focal unit of this framework is a rural area and the quality of multifunctionality in each state is captured by the totality of all kinds of local resources, attributes of individual residents, and activities taking place within the system. The separations of three states indicate for each time period certain quality of system. However, these distinctions are not so distinct as the system change takes a long time and not spontaneous unless there is a fast and abrupt rupture that changes the state of system quality dramatically.

In Figure 14, the initial state of rural system is described as "I. Subsistence farming" shown as Past 1. In this stage, rural communities are agrarian and self-sufficient. The quality of multifunctionality, therefore, appears strong. The three types of capitals are considered well balanced at this stage. Such a solid balance is a critical condition for the survival of a subsistence community.

Once rural communities increase their engagement with outside systems, often at the time when the market system is introduced, a rural system transits to "II. Embedded into global systems" phase which is shown as Past 2 in Figure 14. In this stage, the economic capital is often strengthened to build an economically oriented system. This transition from subsistence farming to global system tends to drive agriculture toward intensification, monoculture-based production, and often cause declines of environmental and social capitals due to degradation of the local environment and outmigration of young population from rural areas (Parnwell, 2007; Rigg, Veeravongs, Veeravongs, & Rohitarachoon, 2008; Wilson, 2010).

At the present state, which is the third state in Figure 14, Wilson (2010) argues that there are three possible pathways for rural areas which are (I) Super-productivist rural system, (II) Deagrarianized rural system, and (III) Relocalized low-intensity rural system

(Wilson, 2010) (Figure 14). Super-productivist rural system implies the economic oriented state in Figure 13, in which the concentration on economic capital is pursued further. Towards this direction, approaches based on productivist paradigm are preferred such as intensification and specialization in agricultural production. The pathway of deagrarianized rural system initiates a transfer to non-agricultural sector in rural areas. The main goal for this deagrarianization process would be to achieve alternatives to ensure economic capital development. The third possible pathway, relocalized low-intensity rural systems direction aims to achieve a higher multifunctionality quality than the other two pathways by aiming at a well-balanced relationship among the three types of capitals. Based on this discourse, the choice of 'C' would lead to a lower and 'A' and 'B' would maintain same or higher quality of multifunctionality. However, it is important to note that these three possible pathways are not exclusive to each other. In reality, each rural community would be exhibit the mixed directions through A to C, while the entire rural areas would still be affected largely by the external, wider social interests of the society. For example, individual communities could direct themselves to relocalized rural systems pathway by conducting locally-based initiatives while the national rural policy takes the direction of super-productivist to make its agricultural sector competitive to the global market system. In fact, in the past, the introduction of market system caused a rural transition from subsistence farming (1^{st} state) to embedded into global system (2^{nd} phase) by emphasizing economic capital (Figure 14). Other social changes such as economic growth of the country, globalization affects both in value changes and liberalized market mechanisms, and demographic changes would predetermine the possible directions for rural areas. Such possible transitional space is termed as "pathway of possibilities" (Wilson, 2008).

Apart from these three pathways, there is the marginalization direction as the fourth possible pathway for today's rural areas, particularly in the case of Japan (Figure 14). General rural declines in terms of weakening local economy and demographic changes namely ageing and depopulation are widely observed that have induced critical declines of community function and social vitality in rural areas. As a more practical issue, the withdrawal of service providers and the closure of public facilities such as local schools and

community centers are also accelerating the trend of rural decline. As the ultimate end of such a situation, there will be a marginalizing phase for certain rural communities or even at rural area as a whole.

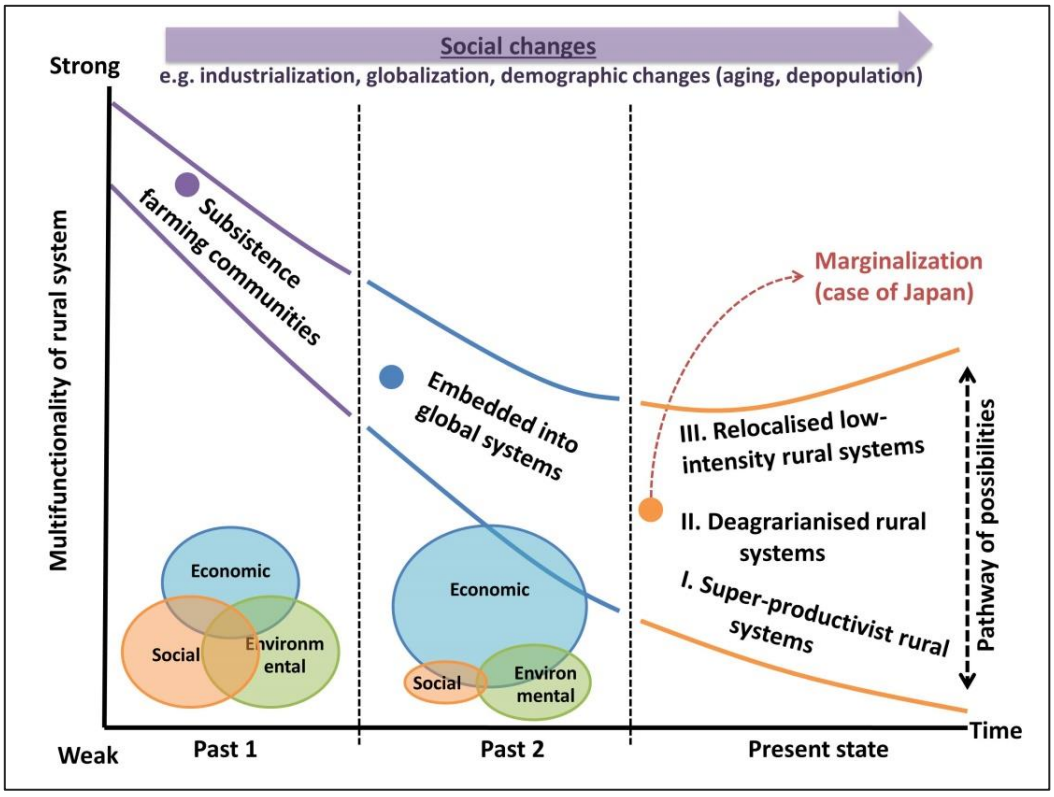

Figure 14 Temporal evolution of the rural system with the quality of multifunctionality (Source: modified based on Wilson, 2008)

3.5. Marginalization of Rural Communities: Emerging Challenges in Living Conditions in Rural Japan

As it was described in Chapter 2, aging and depopulation are occurring to a greater degree in rural Japan. These demographic changes are largely irreversible since they are linked to individual's life plans and the improvement of medical cares. These demographic changes are affecting the state of rural areas firmly, and in fact some of the rural communities are facing their possible closures. The fourth possible future pathway for rural

areas, “Marginalization” shown in Figure 15, represents the unsustainable transition for rural communities as they experience various declines of social functions. Along with other possible pathways, it is important to study the details of this fourth pathway. More specifically, the marginalization process of rural communities needs to be well examined in order to understand the key factors to consider as we discuss sustainability of rural areas in the era of aging societies.

In rural communities, residents form the neighborhood based social relationships that have certain functions to maintain the local livelihood. These functions formed collectively by the residents are recognized as ‘community functions’ (originally ‘*shurakukino’* in Japanese) by Japanese scholars in rural studies (Kasamatsu, 2009; Odagiri, 2009, 2011a; Ono, 1991, 2008; Sakuno, 2006). This term is also widely used by the official reports of the ministries and research institutes to refer to the social vitality as well as nature conservation functions of local activities formed at rural communities (MAFF, 2008; MLIT, 2007; RDPC, 2008). Although there is no set of identified activities to measure the degree of community function, early studies suggest such collective actions by local residents as a comprehensive concept to capture the degree of community vitality of each rural area or community. For example, those maintenance works of local resources, seasonal cleanups, and annual events related to their local rituals and traditions are considered as such activities that determine the quality of community function. Community function is a useful notion to understand the self-managing capacity of a rural community, and its decline implies the weakening of community vitality.

As a rural community experiences the decline of community functions, the local residents also face diverse challenges in their living conditions in such aspects as mobility and access to basic items (Asai, Kawasuso, & Oura, 2012; Kuramochi, Tanimoto, & Tsuchiya, 2014), management of private properties such as vacant houses (Shinobe & Miyachi, 2012; S. Yamamoto & Nakazono, 2008; Yusa, Goto, Kurauchi, & Murakami, 2006) and abandoned farmlands (Ishimaru, 2009; Takamoto, Miura, & Nakayama, 2004), and other daily chores within communities (Niinuma, 2009; Tamasato, 2009). Declines in

the quality of collective activities as well as the living conditions of residents are considered as possible threats to the well-being of residents and also to the sustainability of rural areas. These declines signify the marginalization of rural community. The term 'marginalization' is applied from Ono (1991, 2008) who created the term "marginal community" (originally *"genkai shuraku"* in Japanese) which explains a state of rural community in which more than 50% of the residents are older people (aged 65 and over), and a significant decline of community function is observed so that this community cannot organize its own ceremonial events (Ono, 1991, 2008)[3]. While Ono's work of marginal community was instrumental in gaining the public attention for the issue of depopulation and aging in rural areas, it was so influential that many small scale municipalities would start calling themselves 'marginalized areas' only by examining their proportion of age 65+ residents. Such side-effects appeared excessively and created a negative atmosphere for the future of town and village level municipalities (Hatamoto, 2010; Niinuma, 2009; Odagiri, 2011a). Therefore, studies on the detailed process of community marginalization are much in need to clarify the importance of original arguments made by Ono. It would also be useful for those local officers of town halls and residents who face actual declines in local activities in the field.

The idea of community marginalization was developed further to a conceptual framework (Kasamatsu, 2009; Odagiri, 2009, 2011a; Sakuno, 2006) and Ono's explanation of a marginal community is linked to the last stage of the proposed framework (Figure 15). The developed framework of community marginalization captures the decline of community function level based on the size of community population, and this whole process is determined as 'marginalization process' of a rural community.

As it is shown in Figure 15, the marginalization process of rural community is described in three stages. The first stage is the state of a rural community in which a drastic population decline happens, but the degree of community function is maintained by the

[3] Ono (1991, 2008) coined "marginal community" as one of the four classifications to indicate different conditions of rural communities in terms of their self-managing capacities based on the proportion of age 65+ population in a community. Similar attempt to categorize the degree of depopulation of rural communities was done by Yamamoto based on the depopulation rate during 1970s (T. Yamamoto, 1996).

remaining residents. In other word, there is still enough number of residents in the community to maintain the same degree of community function. The local events, production activities, and other community activities are maintained with the same contents and frequency as in the past at this stage. The second stage explains the state of community in which the size of population becomes smaller than the required size to maintain the same degree of community functions. At this stage, a community has already lost its critical mass, hence residents start to observe downsizing or disappearance of certain events and activities at their communities. At this stage, various local activities are becoming simplified or gradually downsized and integrated with other occasions. In those rural communities in this second stage, residents have their community gatherings, collective actions for maintaining common resources, and other local events at less frequency and smaller scale. The third stage of the marginalization process describes the state of community where only a few households, often of elderly residents, remain in the community. Therefore, the degree of community function becomes significantly less than the previous two stages. In those communities in this third stage, we often observe abandonment of local properties such as individual houses, farm lands, and community center. At this stage, aging of residents would also have a significant impact on the degree of community function. However, being at this stage does not immediately suggest that residents are having severe living conditions in all aspects of their daily lives. This stage only explains the changing condition of community functions and related physical changes of the community.

In addition, this framework provides the two turning points between the 1st and 2nd stages and between the 2nd and 3rd stages, which indicate fundamental downward shifts in the quality of community function. These conceptual turning points are important notions as we discuss possible approaches to those communities in different stages of the community marginalization. Those communities which have just passed the 1st turning point are likely to be able to maintain their local events and the same quality of living conditions as in the past. However those communities which have passed the 2nd turning point need more support from external entities in order to maintain the minimum level of community function to sustain the quality living of residents (Kudo & Yarime, 2012).

Previous studies also pointed out this 2nd turning point as a critical moment for rural communities after which the degree of community function declines sharply and almost disappears towards the third stage of the process (Kasamatsu, 2009; Odagiri, 2009; Sakuno, 2006).

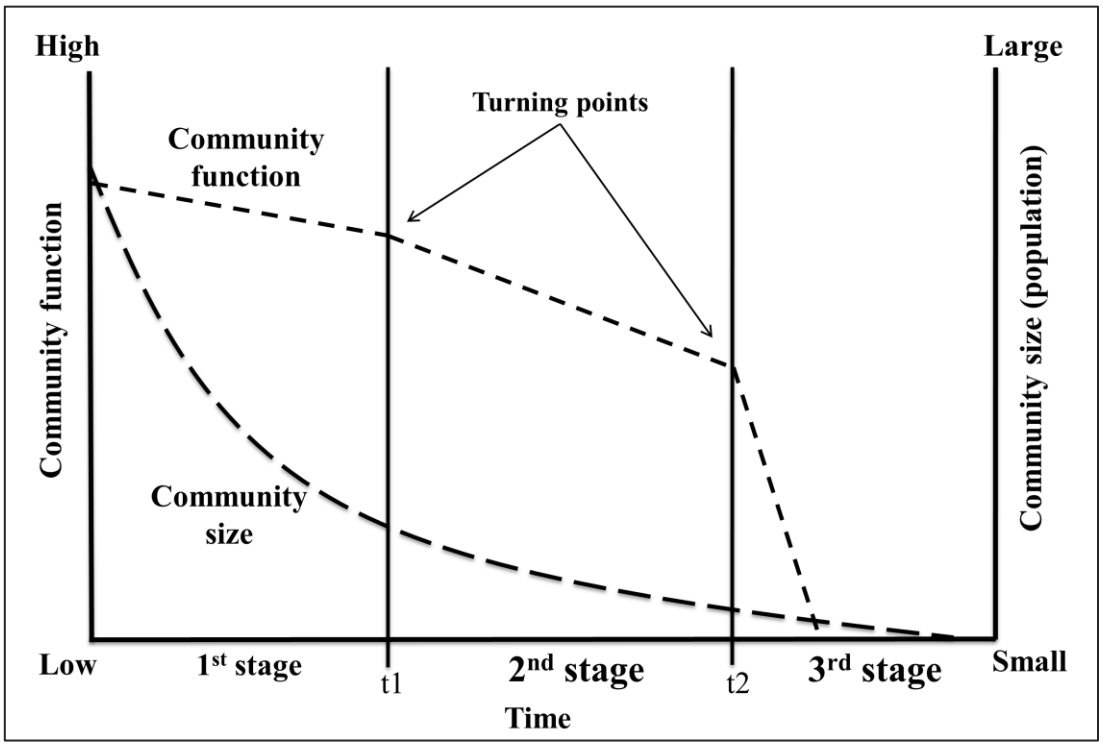

Figure 15 Conceptual illustration of the marginalization process of rural communities (Source: modified from Kasamatsu (2005), Odagiri (2009, 2011), and Sakuno (2006))

This marginalization framework is useful as it provides a systemic perspective to represent the different qualities of target community in different points in its time scale. This framework could also be applied as the fourth possible pathway for rural communities in the multifunctionality framework (Figure 14). In contrast to this view, previous studies took topic-based approaches in such fields as influence of globalization to agriculture (Hall, 2004; Marsden & Sonnino, 2008; Morgan et al., 2010), migration to rural areas (Champion,

1989; Hugo & Moren-Alegret, 2008; Mitchell, 2004), and livelihood of rural elderly residents (Atterton, 2008; Lowe & Speakman, 2006; Stockdale, 2011). Rural studies in Japan have also addressed different social challenges separately such as the decline of agricultural activities (Ishimaru, 2009; Sasaki, Koyama, & Matsuura, 2007; Tsukada, 1997), general living conditions in marginal communities (Niinuma, 2009; Noguchi et al., 2010; Takegawa, 2010), and revitalization of rural economy by increasing the interactions with urban residents (Fujita, 2005; Tsutsui, Ebihara, Zushi, & Sakuma, 2008). However, the challenges rural communities are facing today are the mixture of all these concerns and, furthermore, there is a strong influence of demographic changes behind, therefore, a more integrated approach is required to comprehend the process of community marginalization.

The proposed framework explains the community marginalization process conceptually, yet there is a need for empirical studies to capture the actual changes that rural communities experience in different stages of the community marginalization. By doing so, the process of community marginalization can be well understood. This research gap will be addressed by the first fieldwork of this dissertation. Also, by situating this process of community marginalization shown in Figure 15 within the multifunctionality framework in Figure 14, more holistic analysis on the possible future pathways for rural areas can be conducted.

3.5. Summary

This chapter presented the multifunctionality framework than captures the qualitative changes of rural areas based on the balance of economic, environmental, and social capitals. The original discourse of multifunctionality emerged in agriculture and rural development policy and the concept has been developed based on three paradigms, which are productivist, post-productivist, and sustainable development paradigms. As the concept was developed to sustainable development paradigm, the recent studies brought the concept of multifunctionality into an analytical framework to capture different phases of rural system. This framework suggests three possible future pathways for rural areas, which are super-

productivist, deagrarianized, and relocalized low intensity rural systems. Reflecting the current challenges of rural areas in Japan, the fourth direction, marginalization pathway was added in this framework. This developed framework is applied as the overarching analytical framework for this research. Further details of fieldworks are discussed in following Chapter 4 and Chapter 5, and in Chapter 6 those findings from two fieldworks will be analyzed jointly with the application of the multifunctionality framework.

4. FIELDWORK IN KAMIKOANI VILLAGE IN AKITA, JAPAN

The aim of this chapter is to present the first fieldwork of this research that was conducted in Kamikoani village in Akita, Japan. This fieldwork is designed to address the first sub-objective of this research which aims to elucidate the process of community marginalization from the perspective of residents' living conditions at the community scale. The framework of community marginalization, which is discussed in Chapter 3, is applied to develop a working hypothesis that illustrates the relational declines of community function based on the population size. This fieldwork is composed of household-based questionnaire survey and semi-structured interviews to key informants. Results of these surveys are presented within the framework of community marginalization.

4.1 Description of Kamikoani Village

Kamikoani is located in Akita prefecture (hereafter Akita) (Figure 16). The total population of Akita in 2010 was 1.08 million people which is the 38th largest prefecture in Japan. Akita is in a trend of rapid aging and depopulation. Among the 47 prefectures in Japan, Akita has the highest proportion of age 65+ population which is 30.7 per cent in 2014. Demographic predictions suggest a continuous aging of its population and the proportion of older population is projected to be 41.0 per cent by 2030; the similar proportion of older population is expected at the national scale by 2050. In terms of its population changes, Akita had the lowest population growth rate, which was -5.2 per cent in two national census time between 2005 and 2010. Currently, Akita is losing around 10,000 people every year and this is largely caused by social population declines due to out-migration of young population rather than the natural population decline.

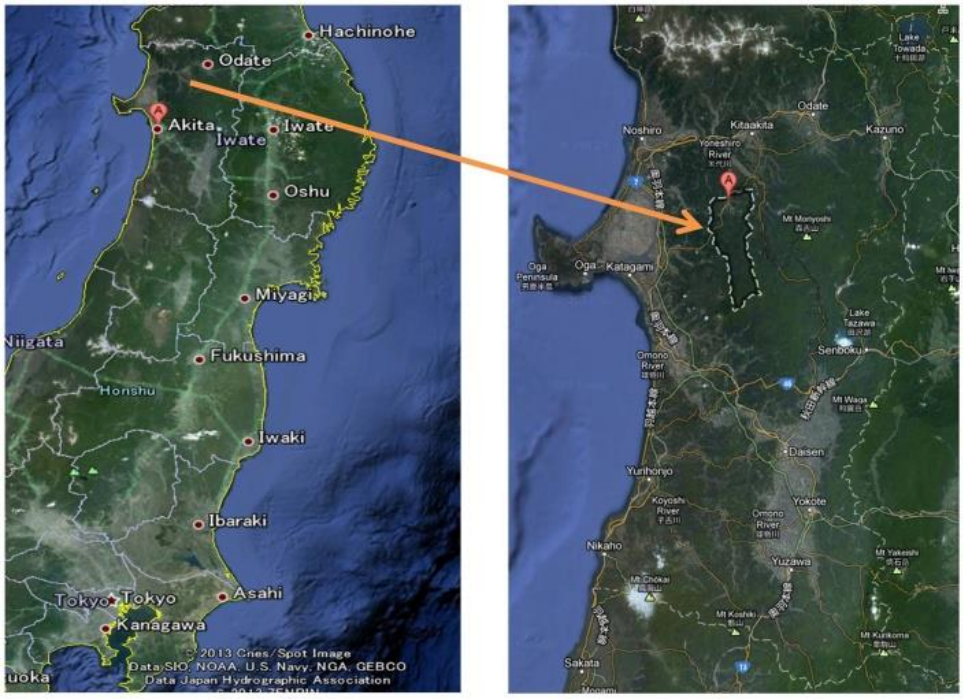

Figure 16 Location of Akita prefecture and Kamikoani village (Source: created from Google map)

The total size of Kamikoani village (hereafter Kamikoani) is 256.82 km^2 and 92.7 per cent of the land is covered by forest. Currently, the village has 2,674 residents of 1,204 households (as of April, 2013). The village is located within Dewa mountain terrain area and its geographical boundary is stretched in north-south direction. The east, west, and south boundaries of Kamikoani are surrounded by 800~1,000 meter high mountains while the northern boundary is relatively low and connected to Kitaakita city (hereafter Kitaakita) and Futatsui area of Noshiro city. Owing to the relative proximity as well as shorter distance, about half of the working population in Kamikoani commutes to the central area of Kitaakita. Agriculture, particularly rice production and the management of the local forest areas are the two major economic activities of the village. However, due to the declining trend of agriculture and forestry, the local economy of Kamikoani has been shrinking.

The population of Kamikoani has been decreasing since 1960s and the village also has the highest proportion of age 65+ population in Akita. The depopulation rate was particularly high in later 1960s and early 1970s in which 10~20 per cent of population was lost due to the out-migration of young population. Since there is no high school in the village, those populations between ages 16 years to 18 years are smaller than the younger population groups. The trend of depopulation remains evident in Kamikoani and the most recent depopulation rate is -12.2 per cent between 2005 and 2010. As the young population keeps flowing out from the village, the proportion of older population continues to increase.

As the fieldwork for this dissertation, particularly for the analysis of community marginalization process, Kamikoani is considered an appropriate study site with the following reasons. The first reason is that the village has the highest proportion of age 65+ population, 45.6 per cent in 2014, among all 25 municipalities in Akita. As we look into smaller areas inside of each municipality in Akita, it would be possible to find other areas with even higher proportion of age 65+ residents; however it would be important to set the boundary of case study as the same as the administrative boundary since various measures to aging and depopulation issues are initiated at this scale by the local municipal government. The second reason is about this administrative boundary. While most of the municipalities in Akita experienced city and town amalgamations during the promotion period by the national government, Kamikoani did not merge with any of its neighboring cities and towns. By March of 2006, the number of municipalities in Akita was 25 from its original number of 69 municipalities. Kamikoani is one of the 8 municipalities which did not choose to merge with other municipalities. In this sense, the village has kept its original administrative area. This point suggests that the demographic data is not affected by this amalgamation and also people's sense of their own village boundary has not changed as well.

The third reason is related to the initiatives of the local government in which they have started various activities to revitalize local communities. The town hall government has accepted three young residents under *Chiiki okoshi kyoryokutai*[4] scheme funded by the Ministry of Internal Affairs and Communication.

The current activities of these three young residents under *Chiiki okoshi kyoryokutai* can be classified into two categories. The first category is to provide daily based support to those communities and households in which residents are experiencing difficulties in maintaining local festivals, farming operations, and daily choirs both at communities and individual households. For example, they offer transportation service to those households who do not have independent transportation mean to a hospital in next town, help removing snow from the roof top, and support farming operation of older residents' households. This daily support to communities and households is to prevent any fears among the residents regarding the living conditions at each community. The second category of their activity is about regional revitalization initiatives. In order to revive the social vitality and economic viability of the village, those three members are assigned to initiative local projects. One of the most representative regional revitalization activities they have started in the village is an art festival called Kamikoani Project. This project started in 2012 and it is held every year during the summer. During the festival, art works are exhibited within the village and also series of small events are organized. This festival utilizes the local landscape as a space for exhibition and invites visitors from the outside of the village. The local residents are also participating as volunteers for preparation and also staff during the festival.

Additionally, the local government of Kamikoani is quite concerned about the situation of livelihood declines due to the depopulation and aging of residents in each

[4] *Chiiki okoshi kyoryokutai* is a project initiated by the Ministry of Internal Affairs and Communications since 2010 to provide human resources to those rural areas where various local challenges are emerging in residents' living conditions, resource management and agricultural activities, and other economic activities due to the continuous depopulation as well as the aging of the remained residents. This project supports local municipalities to invite those young people in urban areas who are interested in living in rural areas. The Ministry of Internal Affairs and Communications also finance four million yen per person per year. Currently there are 617 persons in 207 municipalities are assigned for the local mission under this scheme.

community. There was a need for a large scale survey on the general livelihood of residents at community level. Especially the government was interested in knowing the situation of residents' access to basic services such as public transportation, grocery, and medical services.

4.1.1. Population of Kamikoani

Figure 17 shows population changes of Kamikoani from 1920 to 2010 and population predictions up to 2040. The village has experienced a long term trend of depopulation since 1960s. The village had the largest population in 1960 at 6,972 people. In terms of age group compositions, there were 35.2 per cent of youth, 60.9 per cent of working, and only 3.9 per cent of older population groups in 1960. Later, the village experienced a drastic population decline between 1965 and 1970. The total population in 1965 was 6,550 people and it declined to 5,242 people by 1970. Within this five year time, there was a decline of 1,308 residents which corresponds to 20.0 per cent of the total population of 1965. The village experienced further depopulation and its total population became 2,727 people by 2010 (Figure 17).

While the village went through continuous population decline since late 1960s, the proportion of older population increased drastically to 44.6 per cent by 2010. According to the projections, the same figure is expected to reach 55.0 per cent by 2040. It is also important to note that the proportion of older population will surpass the figure of working population by 2015; there will be 45.9 per cent of working population to 47.8 per cent of older population in the village. This implies that the proportion of dependent population will be larger than supporting (working) population in the village. The predictions also show that the total population will decline to 1,246 people (54.3 per cent decline since 2010) by 2040. In summary, by 2040 the total population of Kamikoani will become less than half of the current figure and there will be about 10 per cent larger dependent population than working population. It is predicted that there will be a series of local challenges in order to maintain a good quality of living conditions not only among older residents but also other groups of residents.

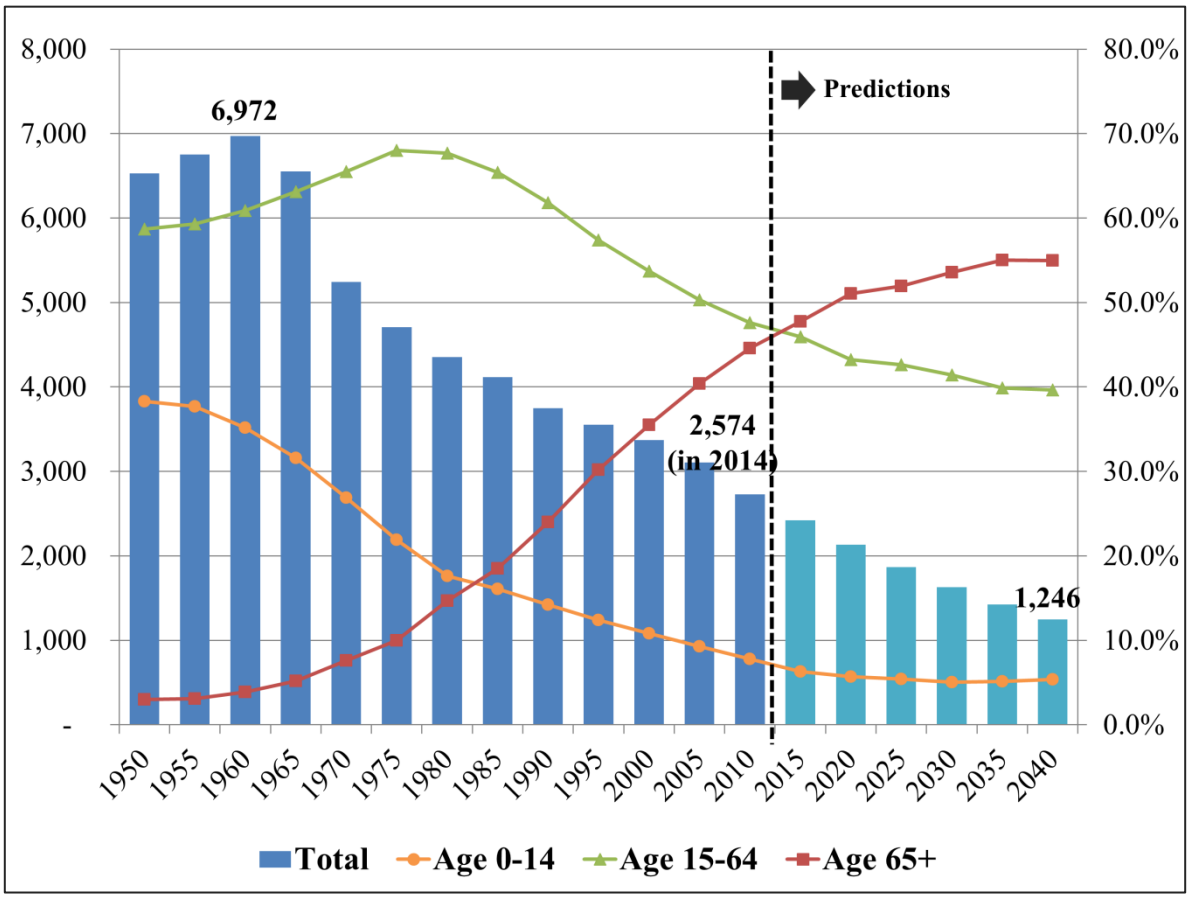

Figure 17 Changes in the total population and shares of three age groups in Kamikoani since 1950 to 2040 (Source: created from the population statistics of Kamikoani, National Census, and demographic prediction figures from National Institute of Population and Social Security Research)

4.1.2. Economic structure of Kamikoani

The economic structure of Kamikoani took the same pattern of change as that of Akita prefecture in the last 50 years, which is the transition from agriculture to service sector. Figure 18 shows the proportion of working population in each industry and sector in 1960 and 2010. In 1960, the share of primary industry was 73.7 per cent in which 53.7 per cent was in agricultural sector and 20.0 per cent was in forestry sector. One characteristic of economic structure of Kamikoani in 1960 is its higher proportion of forestry (20.0 per cent) which is 17.3 per cent higher than the total figure of Akita. The shares of secondary and tertiary industries in 1960 were 12.3 per cent and 14.0 per cent respectively. However, the share of tertiary industry increased rapidly and today it consists 56.0 per cent of the local employment in Kamikoani. Today, the largest share of working population is found in service sector at 35.0 per cent. Those other sectors with relatively larger proportions are manufacturing (15.6 per cent), agriculture (11.6 per cent), construction (11.6 per cent), and wholesale and retail (11.1 per cent).

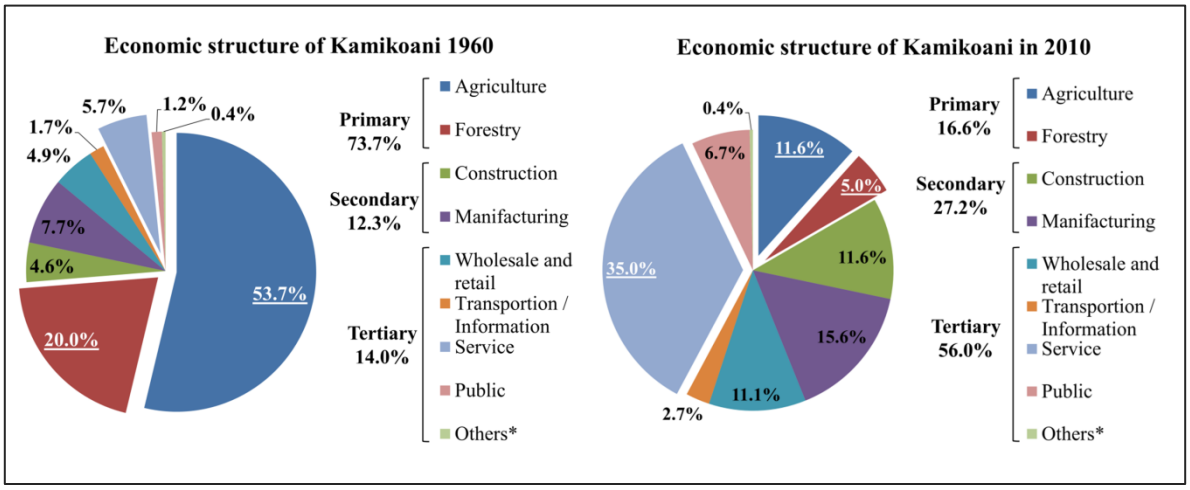

Figure 18 Structure of industrial sectors in Kamikoani in 1960 and 2010 (Source: created from National Census, 2010)

Over time, the total share of primary industry declined from 73.7 per cent to 16.6 per cent, while the share of tertiary industry increased from 14.0 per cent to 56.0 per cent. Accordingly, the total number of farming households in Kamikoani also declined since 1960s. Figure 19 shows the total number of farming households in Kamikoani since 1965. It was largest in 1970 at 776, but has declined to 145 by 2010 (decline of 631) which is 81.3 per cent of decline from 1970.

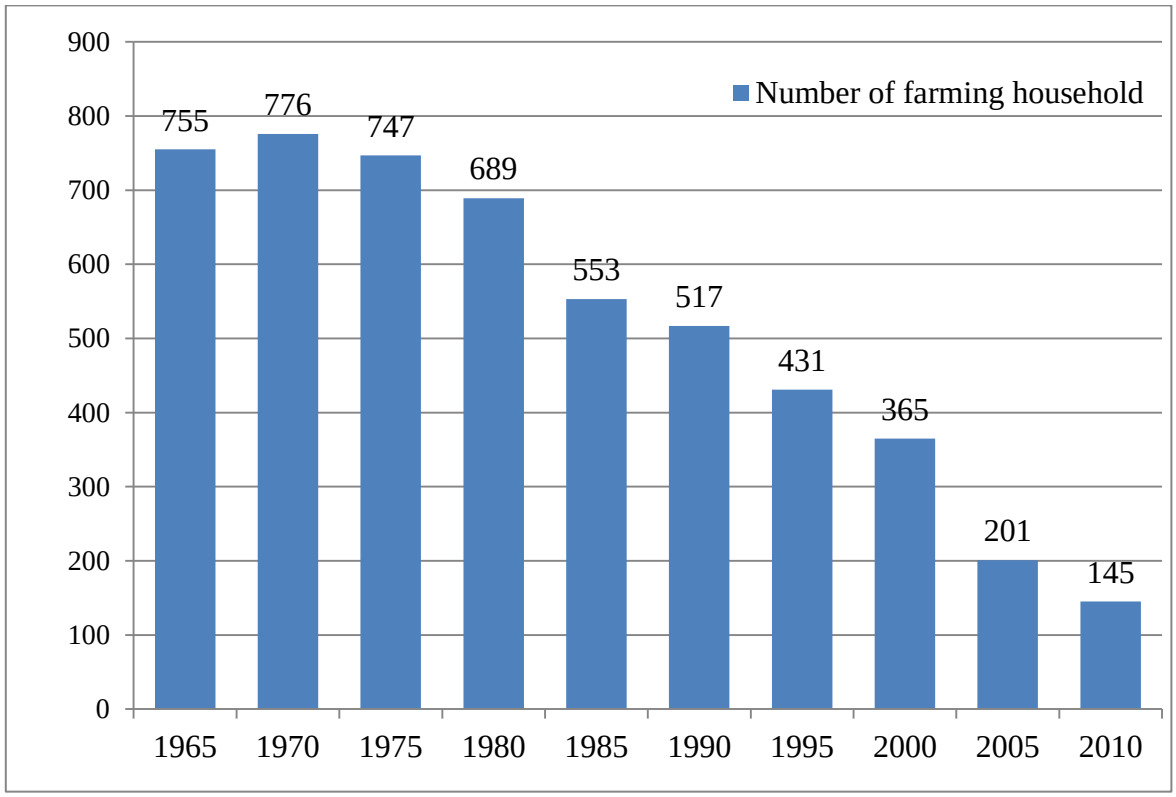

Figure 19 Number of farming households in Kamikoani since 1965 to 2010 (Source: created from the World Census of Agriculture and Forestry, 2010)

In summary, Kamikoani has been experiencing rapid aging of its society and this is not a particular case of this village, in fact the entire Akita is in a trend of rapid aging society. Since those demographic changes causing population aging are only the surface issues of the aging society phenomenon, what is important behind these demographical

aging of population is related to the types of changes occurring at the community scale which affect the livelihood of residents directly. Therefore, those local activities at the community scale such as general living conditions of residents, local property management, and collective actions of residents to organize local events are examined in this fieldwork using the case of Kamikoani.

4.2. Fieldwork Design

The aim of fieldwork in Kamikoani was to examine the process of community marginalization that is caused by population aging and depopulation at the community scale. In order to capture this marginalization process, the framework of community marginalization discussed in Chapter 3 is adopted to develop a working hypothesis. As practical methods, questionnaire survey to households and semi-structured interview survey to the key informants were conducted in this fieldwork. For the analysis of findings from questionnaire survey and semi-structured interviews, community groups were set based on their population sizes. This fieldwork hypothesizes that those findings about each community group represent the state of different moments in the marginalization process in the framework (Figure 20). If the defined range of community groups is wide enough, then those two turning points in the marginalization process should also be captured.

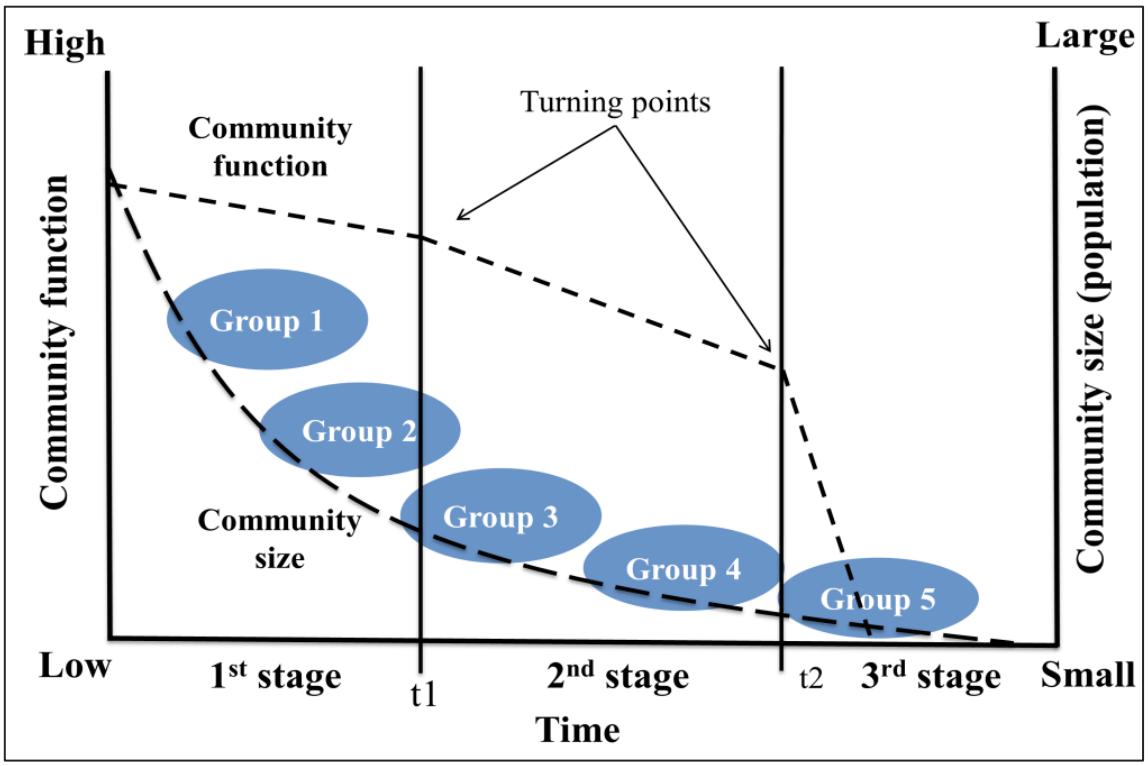

Figure 20 Working hypothesis for the fieldwork in Kamikoani based on the framework of community marginalization (Source: developed from Kasamatsu, 2005; Odagiri, 2008; Sakuno, 2006)

Note: The five community groups shown as Group 1 to 5 were set based on their population sizes. This fieldwork hypothesizes that findings about each community group represent different moment of community marginalization within this framework. Findings from the questionnaire and semi-structured interviews to key informants will be compared among these five community groups.

Table 2 describes the population changes in Kamikoani at the community scale from 1960 to 2014. The 20 communities on the upper side of the table are general residential communities in the village (numbered from 1 to 20). The four communities in blue color background have experienced closures and resettlements. The remaining two communities in red color background are two care facilities located in the village. On average, the 20 general residential communities have lost 61.6 per cent of their population since 1960. The highest degree of population decline happened in Yagisawa (No.18) and Nakamo (No.19) communities. These two communities have lost higher than 90 per cent of their population from their figures in 1960. Particularly, Yagisawa had 199 residents in

1960 which is more than 10 times larger than its population size of today. The second highest degree of population decline was observed in Minamizawa (No.16) and Fudoura (No.20) communities with higher than 85 per cent of population decline. As most of the 20 communities had larger population size in the past, it confirms that these communities are following the population decline line in Figure 20. In other words, by capturing the different qualities of community function in each size of community groups, it would be feasible to describe the general experiences of a rural community as it goes through its marginalization process.

The definitions of community groups were set based on the differences in the size of community population. The target 20 communities as well as the detailed definitions of community groups are shown in Table 2. The number of households and the proportion of older residents in each community were not considered for the possible bases to set definitions of community groups. This is because the number of households may not always reflect the actual living conditions of residents once there are many single households in a community. Also, the proportion of older residents may not reflect the reality of local activities because it is possible to have more than 50 per cent of residents being older population in one community with 100 residents, and the other community with 20 residents. The condition of local activities would be more active in a community with a greater number of residents. However, it is important to note that those communities in Group 5 have relatively higher proportion of older population even though the grouping is solely done by the population size (Table 2).

Table 2 List of 20 communities in Kamikoani and the definitions of five community groups

	Names of community	Group category	Population size	Number of household	Ratio of age 65+ residents (per cent)	Definition of group category
1	Okitaomote	Group 1	831	358	47.2	Larger than 200 residents
2	Kosawada		371	153	33.2	
3	Hadachi	Group 2	193	72	45.1	Between 100 to 199 residents
4	Shimogotanzawa		179	70	48.6	
5	**Oobayashi**		151	66	47.7	
6	Fukudate		133	57	50.4	
7	Kamibussha	Group 3	94	29	33.0	Between 60 to 99 residents
8	Doukawa		93	38	26.9	
9	Sugihana		67	28	58.2	
10	**Shimobussha**		66	25	40.9	
11	Odase	Group 4	55	21	45.5	Between 40 to 59 residents
12	Ooase		52	19	38.5	
13	Nakagotanzawa		48	19	47.9	
14	Daikai		46	18	37.0	
15	**Nagashinda**		45	21	53.3	
16	**Minamizawa**	Group 5	36	21	56.4	Less than 40 residents
17	Kamigotanzawa		21	11	66.7	
18	Yagisawa		17	8	64.7	
19	Nakamo		6	3	100.0	
20	Fudoura		2	2	100.0	
	Kamikoani total		2506	1039	45.5	

(Source: Population statistics provided by the town hall office of Kamikoani)

Note: The communities in bold and with underline are selected for semi-structured interviews

Table 3 show the depopulation rate by five community groups. Since 1960, those two communities in Group 1 experienced 51.4 per cent of population decline. The same rate is about 10 per cent higher for Group 2 (61.2 per cent), 12 per cent higher for Group 3 (63.3 per cent), and 15 per cent higher for Group 4 (66.2 per cent). In the case of Group 5 communities, the rate of depopulation is 85.7 per cent which is considerably higher than other groups. Although the original sizes of community population in 1960 were relatively smaller than those communities in Group 1 and Group 2, two of the communities in Group

5 had about 200~300 residents and one community had 78 residents. From these population sizes, these communities experienced a drastic depopulation. These points imply that the quality of community function at these communities were likely to be organized in a similar degree as Group 3 and 4 communities in the past. Figure 21 to Figure 25 also illustrate the degree of depopulation since 1960 to 2014 in five community groups. These figures prove that regardless of difference of community groups, all 20 communities in Kamikoani have experienced drastic population decline at the community scale.

Table 3 Population changes at the community scale from 1960 to 2014

	Community	Community group	1960	1970	1980	1990	2000	2014	1960 - 2014	Depopu-latoin rate from 1960	Depopulation rate from 1960 in community groups
1	Okitaomote	1	1,730	1,693	1,520	1,219	1,100	831	-899	-52.0%	-51.4%
2	Kosawada		755	614	509	477	442	371	-384	-50.9%	
3	Hadachi	2	434	326	324	277	235	193	-241	-55.5%	-61.2%
4	Shimogotanzawa		459	353	335	289	240	179	-280	-61.0%	
5	Obayashi		485	353	343	285	223	151	-334	-68.9%	
6	Fukudate		328	248	227	186	163	133	-195	-59.5%	
7	Kamibussha	3	271	157	147	137	127	94	-177	-65.3%	-63.3%
8	Dougawa		248	180	168	162	155	93	-155	-62.5%	
9	Sugihana		225	154	141	117	90	67	-158	-70.2%	
10	Shimobussha		147	116	121	120	100	66	-81	-55.1%	
11	Odase	4	156	106	99	91	79	55	-101	-64.7%	-66.2%
12	Ooase		126	81	86	77	63	52	-74	-58.7%	
13	Nakagotanzawa		-	-	-	81	73	48	-33	-69.7%	
14	Daikai		130	86	84	86	73	46	-84	-64.6%	
15	Nagashida		167	128	112	96	77	45	-122	-73.1%	
16	Minamizawa	5	290	167	126	103	73	39	-251	-86.6%	-85.7%
17	Kamigotanzawa		-	-	-	32	24	21	-11	-69.7%	
18	Yagisawa		199	163	89	41	26	17	-182	-91.5%	
19	Nakamo		78	38	35	18	8	6	-72	-92.3%	
20	Fudora		-	-	18	7	4	2	-15	-88.2%	
21	Yashiki		174	76	-	-	-	-	-	-100.0%	-100.0%
22	Oojou		70	29	-	-	-	-	-	-100.0%	-100.0%
23	Oriwatari		68	22	-	-	-	-	-	-100.0%	-100.0%
24	Haginari		204	-	-	-	-	-	-	-100.0%	-100.0%
25	Yuuseien (care facility)		-	-	-	-	78	79	-	-	-
26	Sanpusou (care facility)		-	-	-	86	85	86	-	-	-
	Total		6,972	5,242	4,615	3,987	3,538	2,674	-3849		
	Total of 1~20 communities		6,228	4,963	4,466	3,901	3,375	2,509	-3791	-59.7%	-59.7%

Relocated / dissappeared communities
Care facilities

Note: Population sizes of Kamigotanzawa and Nakagotanzawa were counted as Kami/Naka-gotanzawa area before 1980. Population of Fudora before 1980 are not available from the provided population statistics by the town hall office of Kamikoani.

(Source: Created from population statistics of Kamikoani provided by the town hall office of Kamikoani)

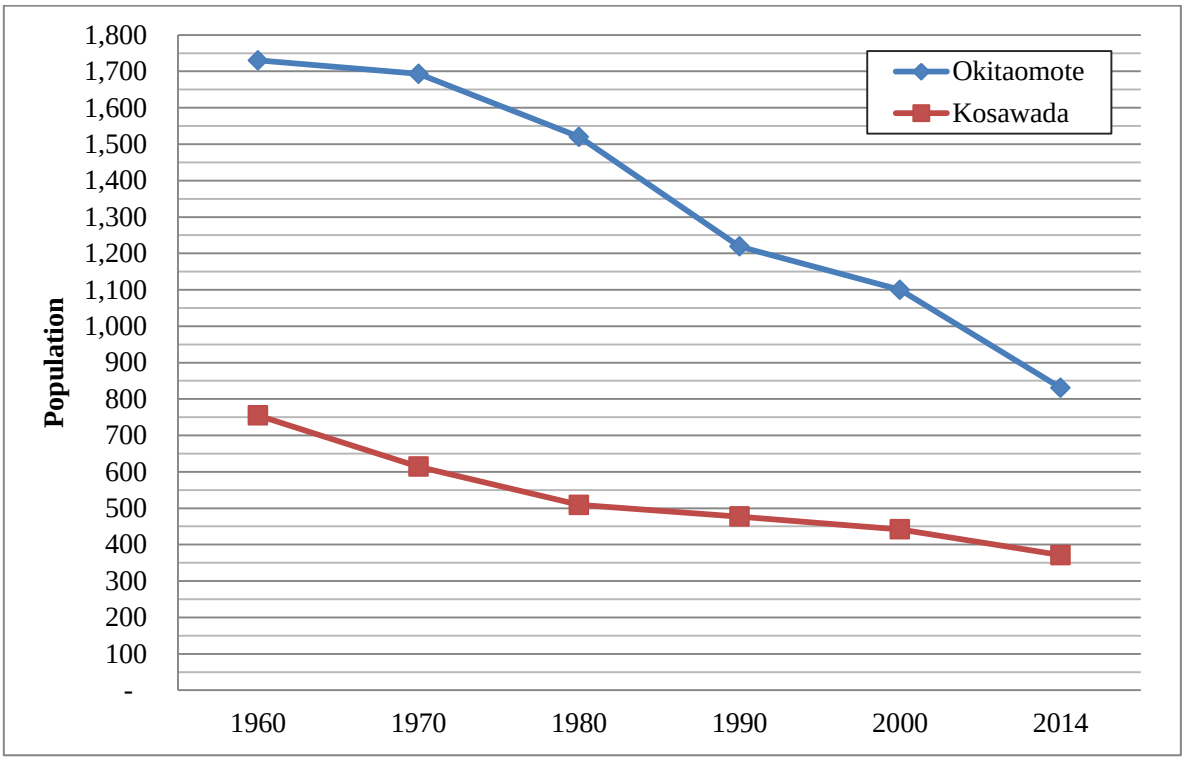

Figure 21 Population change in Group 1 (larger than 200 residents) since 1960

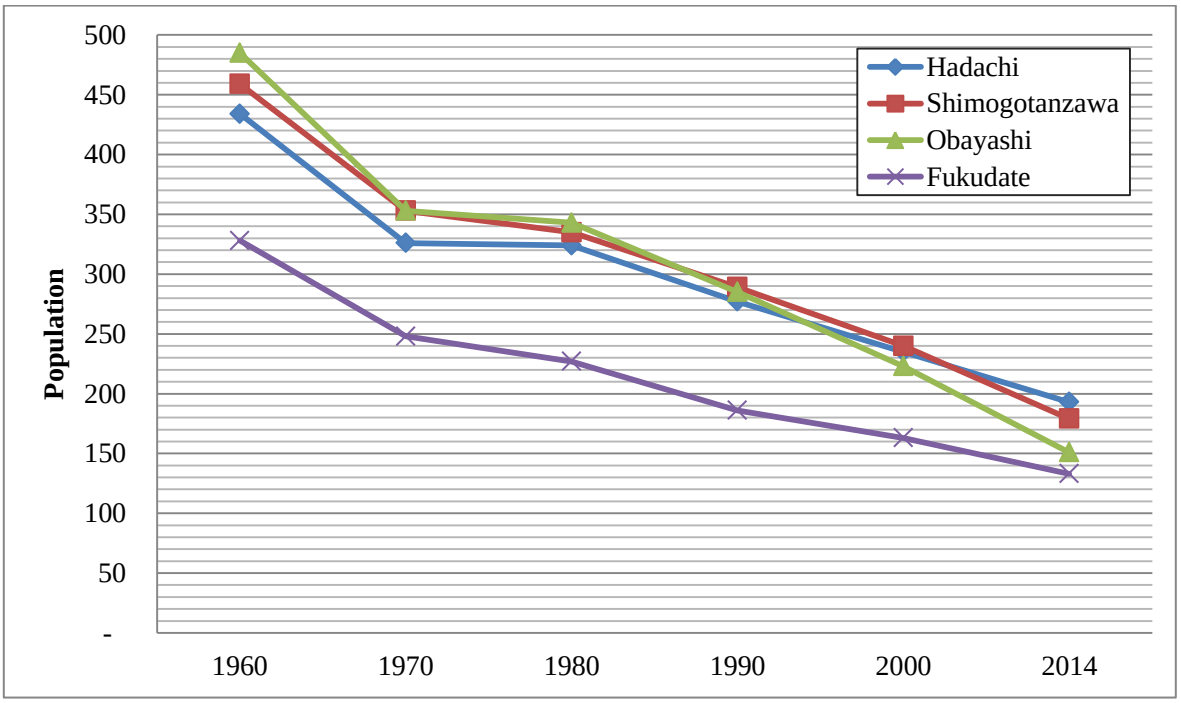

Figure 22 Population change in Group 2 (100~199 residents) since 1960

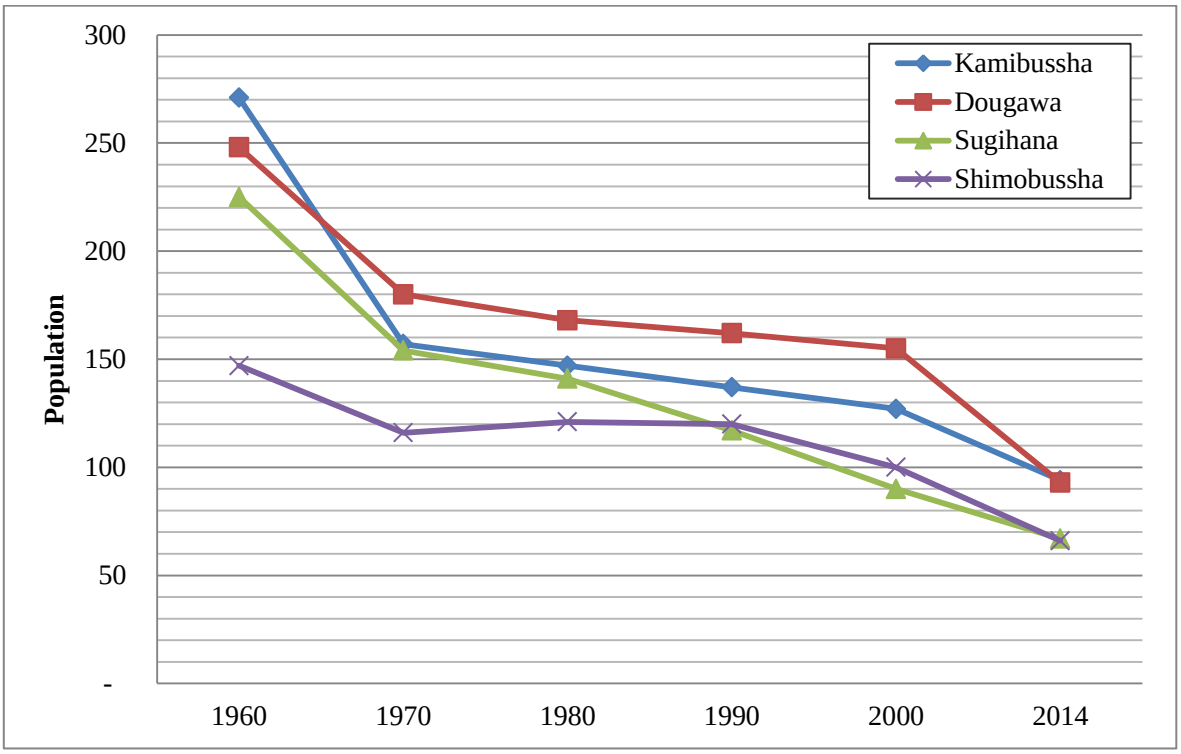

Figure 23 Population change in Group 3 (60-99 residents) since 1960

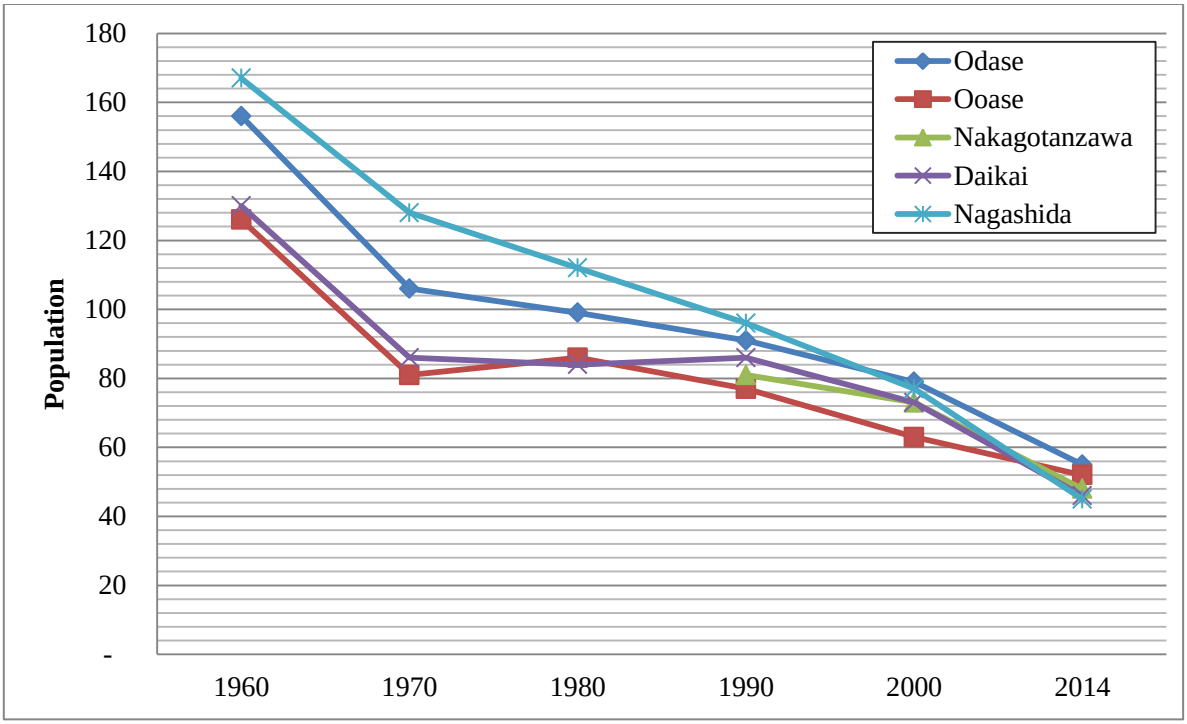

Figure 24 Population change in Group 4 (40-59 residents) since 1960

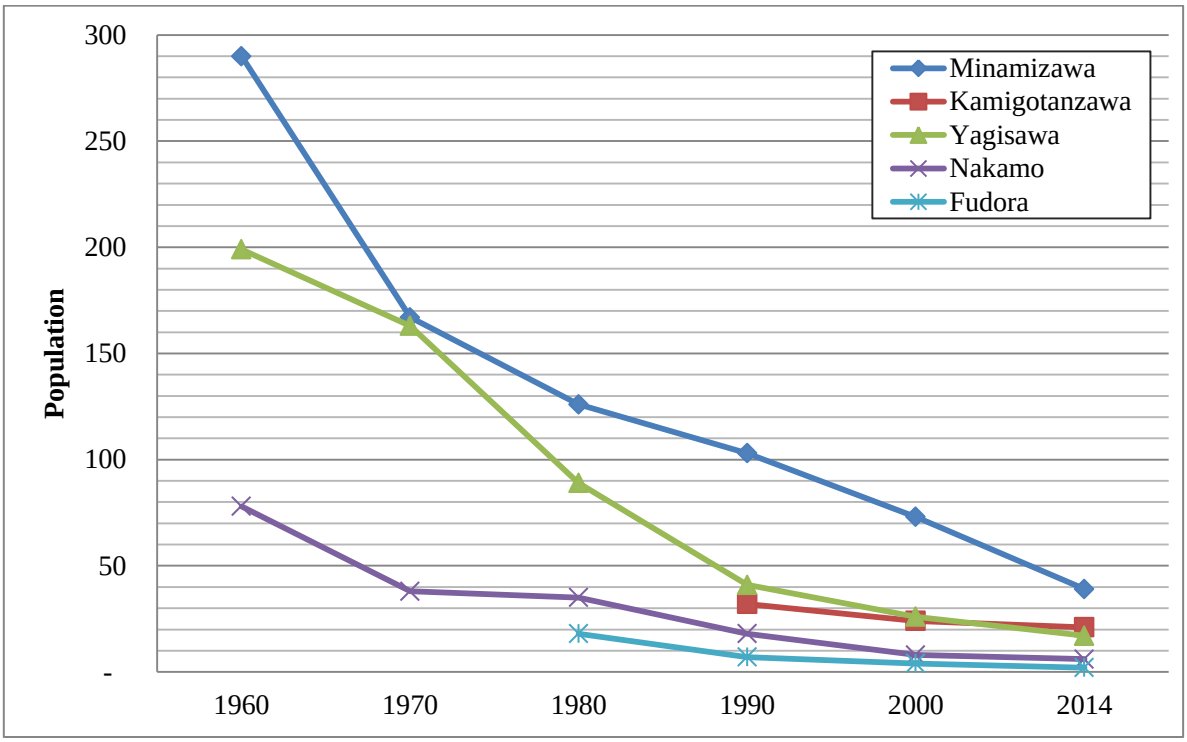

Figure 25 Population change in Group 5 (less than 40 residents) since 1960

The framework of community marginalization developed by previous studies (Kasamatsu, 2009; Kudo & Yarime, 2012; Odagiri, 2009; Sakuno, 2006) sets its focal unit as one rural community and describes the possible decline patterns of community function as it loses its population. However, it would be a challenge to observe such declining process by monitoring actual communities which are losing their population over certain period of time. Therefore, in this study, this line of community population decline in Figure 20 is captured by setting different sizes of communities based on their population sizes (Figure 26). By applying this method, it would be possible to capture the types and degree of community function declines according to the size of community population. These changes that communities experience should illustrate the process of community marginalization.

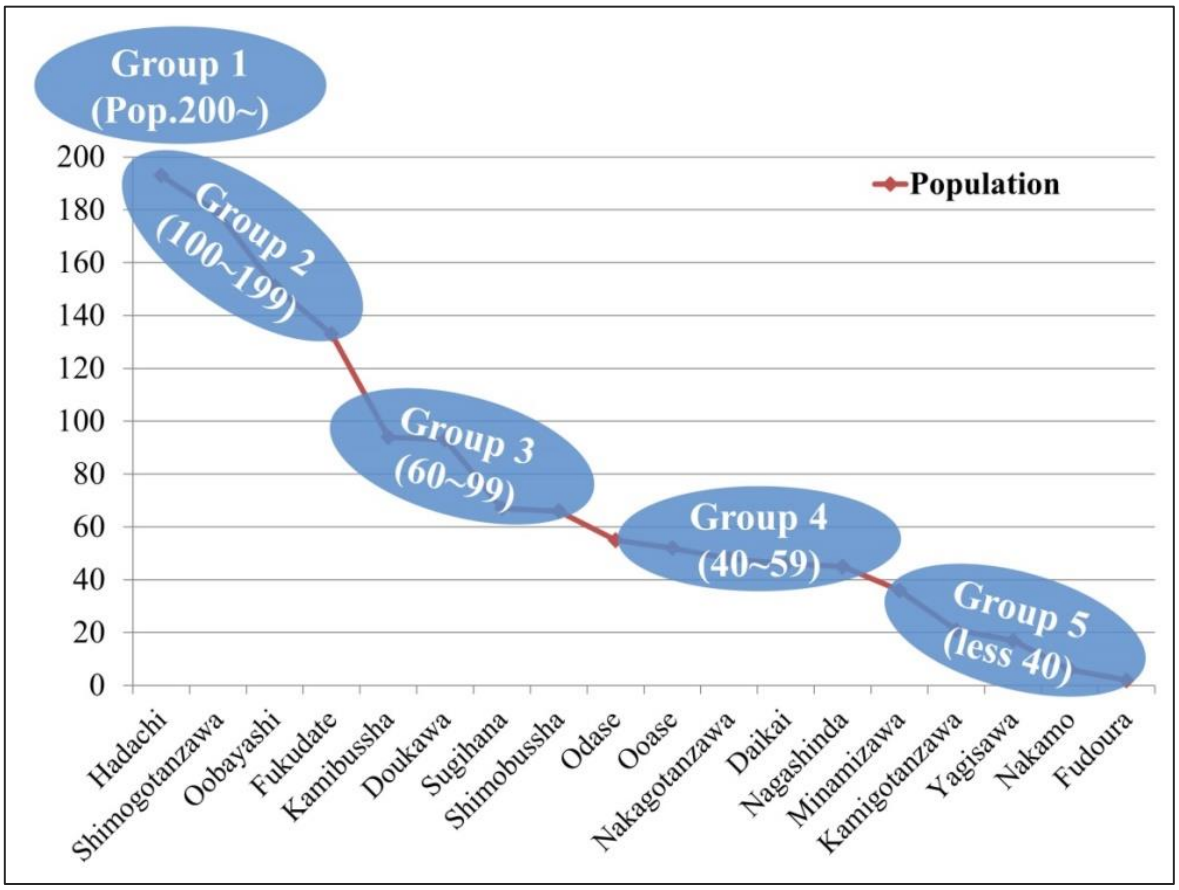

Figure 26 Population and number of households in 20 communities in Kamikoani and five community groups for the field surveys (Source: created from population statistics provided by the town hall office of Kamikoani)

Figure 27 shows the geographical locations of the target 20 communities in Kamikoani. These 20 communities are classified in the five community groups for the purpose of field surveys. The locations of two communities in Group 1 represent the central area of the village. Those five communities in Group 5 are located in the inland part of the village which is more mountainous areas. Those locations of Group 3 and 4 communities are also relatively far from the central area of the village and also in the mountainous areas of the village. All communities are located about 10 km distance from the town hall except Yagisawa community in Group 5 which is located about 20 km away from the town hall in the southern mountainous area of the village.

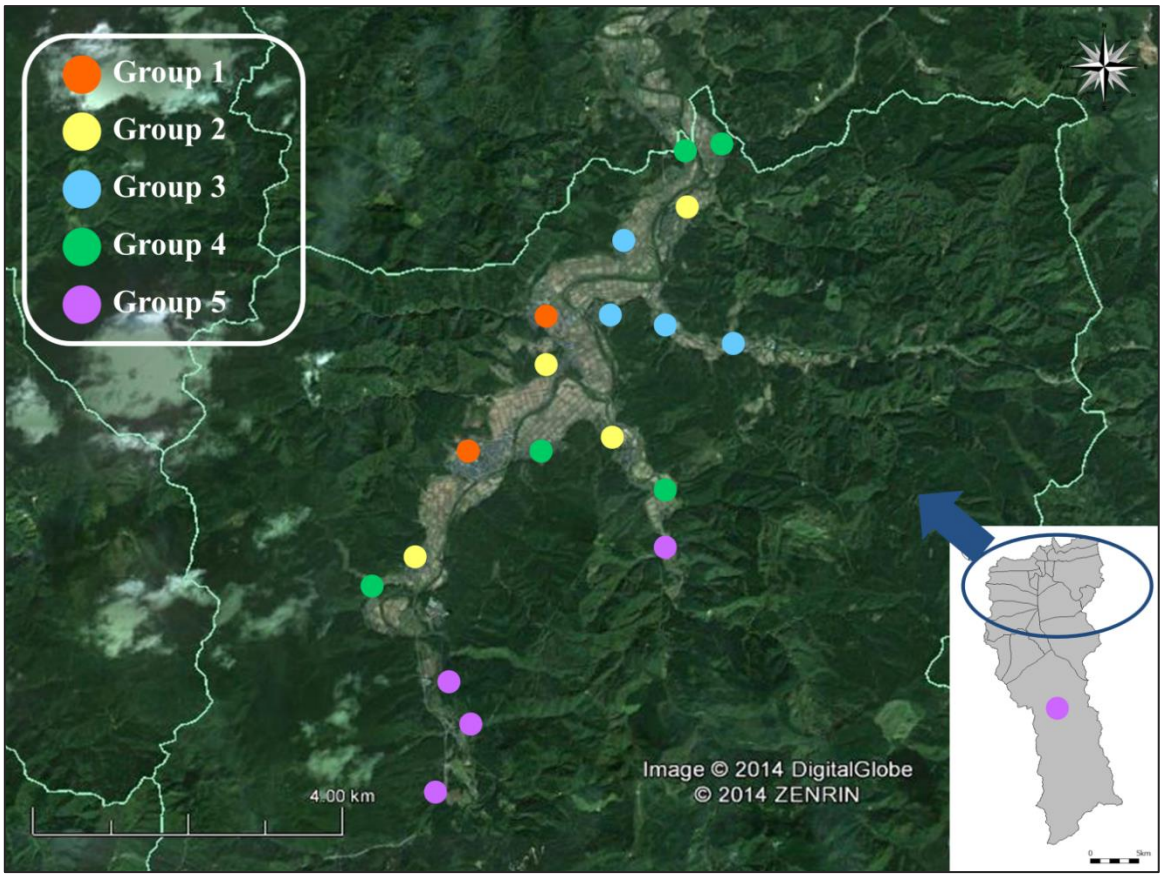

Figure 27 Geographical distribution of 20 communities in Kamikoani by five community groups (Source: Google Earth)

Note: Yagisawa community in Group 5 is located about 10 km inland part of the village. Its location is presented in the smaller map on the bottom right hand side.

4.2.1. Design of questionnaire

The questions for the questionnaire form are developed from the following six categories: 1) household profile, 2) transportation & access, 3) property management, 4) economic state, 5) social relationships, 6) self-evaluation of the living conditions. These categories are developed from literature review on rural living conditions. A total of 18 questions are developed from the six categories (Table 4). To begin with, transportation and access is one of the most discussed topics in the literature. Access to a stable transportation and basic services is seen as a key element for social inclusion in rural settings (Farrington & Farrington, 2005; Preston & Rajé, 2007), while at the same time, several studies have addressed the minimum and affordable size of transportation (Lovett, Haynes, Sünnenberg, & Gale, 2002; Smith et al., 2012). Secondly, the maintenance of both private and community property seem to be a unique topic to Japan. This is because there is especially a high interest to the assessment and management of abandoned agricultural fields in rural areas (Inaba, 2006; Sasaki et al., 2007; Tsukada, 1997). Abandonment of private houses and the loss of local traditions are also seen as critical issues in rural planning (Shinobe & Miyachi, 2012; Ueda, 2007; S. Yamamoto & Nakazono, 2008). These strategic approaches to reorganize depopulated areas are well discussed in line with the marginalization of rural communities (Hayashi, 2011; Nishino, 2010b). Thirdly, much discussion has been made on the issue of local economy, particularly the identification of key elements for its revitalization. The economic state of rural areas can be discussed at various levels from individual to regional levels. In the case of European countries, migration of retired residents from urban areas is seen as a potential boost to the regional economy as they tend to be a key resource for regional economy through their established network from their previous careers (Kalantaridis, 2010; Klinthäll, 2006; Stockdale, 2006b). Additionally, the social relationship among local residents has been studied in relation to rural livelihood. The discussion is especially strong in social capital discourse in rural settings. These studies have examined the relationship between the local environment and the residents' identity formation (Burholt & Naylor, 2005; Heenan, 2010), and key drivers to maintain a rural community being vibrant (McManus et al., 2012). At last, the self-evaluation on the

factors related to local living conditions with Likert-scale method (Kudo & Yarime, 2012) is added in order to find out the subjective evaluation on the current living conditions by the villagers. The self-evaluation method enabled comparative analysis among the five community groups.

Table 4 Applied question categories and contents for the questionnaire

	Question categories	Contents
Q1	Household profile	Members of household
Q2		Age groups of household members
Q3		Working members of household
Q4		Working locations of household
Q5	Transportation & access	Main transportation means of household
Q6		Main access mean to groceries and daily needs
Q7		Frequency of household's access to groceries and daily needs
Q8	Property management	Farm operation of household
Q9		Removing snow of household
Q10		Activities or events that household feels lack of manpower
Q11	Economic state	Working members of household
Q12		Satisfaction level on current income state of household
Q13	Social relationships	Relationships with other members of community
Q14		Relationships with out-migrated family members of household
Q15		Frequency of the out-migrated family members' visit
Q16		Regional activities that household is interested
Q17		Willingness to continue to live in the same community
Q18	Self-evaluation of the current living conditions	Details in Table 7

4.2.2. Implementation of surveys in the fieldwork

The entire survey activities in Kamikoani were implemented as joint surveys with the local government. After a series of consultations with the local officers of the town hall, the questionnaire survey to the all eligible households and semi-structured interviews to the key local informants were proposed by the author. The consultation with the local officers was important to set questions in questionnaire forms to be aligned with the actual situations of the village. Also, their participations to the semi-structured interviews are helpful to avoid misinterpretations of the comments of informants, to gain additional explanations about the detailed information of the village, and to have direct involvement of the local government on the raised topics in the discussions.

As the first phase of the fieldwork, the questionnaire survey was conducted to 1,039 households of Kamikoani as a form of complete household survey. There are two care facilities in Kamikoani which have 165 residents of 165 households. Through consultation with the town hall officers, it was decided to exclude these two care facilities from this survey. The questionnaire forms were delivered to each household at the occasion of distributing the monthly newsletters from the town hall in July 2013. Those households were requested to return the forms in one month time. The total return was 520 (return rate of 50.0 per cent) by the end of August 2013.

As the second phase of the fieldwork, the semi-structured interviews were conducted mainly to six local key informants; they are four local community leaders from Oobayashi, Shimobussha, Nagashinda, and Minamizawa communities, and two leaders from local NGO transportation service. These four community leaders are in their late 60s and early 70s, and they are all in charge of managing the local activities at each community. They work closely with the other board members of neighbors' association at their own community, therefore, they have a good understanding of seasonal events, local festivals and traditions, and daily based mutual support among the community residents. Since they are serving as the leader of community, often for several years, they are quite knowledgeable about the history of their communities and also hold a wide perspective

about their future. Those members of local NGO also share such wider perspective about the current state and possible future figures of the village

These four community leaders were selected from community groups of 2 to 5. Group 1 was excluded for two main reasons. The first reason is that those two communities in Group 1, Okitaomote and Kosawada communities form the central area of the village so that the accessibility to basic services such as grocery stores, post offices, and the village's clinic is much easier; hence their living environment is considerably different from other communities. The second reason is that the population sizes in these two communities are both larger than 200 people; therefore it would not be any trouble in maintaining sufficient quality of community function.

All interviews were conducted in January 2014 and they were organized jointly with two local officers from the town hall who work for regional revitalization activities in Kamikoani. Additionally, there were few other interviews with young residents, leader of a woman's group, and informal conversation with local residents during the fieldwork. In this chapter, the findings from the interviews with local community leaders and NGO transportation service are mainly provided since the topic being discussed in the interviews with them are more related to living conditions in the village.

4.2.4. Note for statistical test procedure

In order to examine the results of questionnaire survey, a series of statistical tests was conducted. The main objective of these statistical tests is to find out the statistically significant differences in the responses of five community groups. Since the questionnaire was designed with a provision for answer options for each question, the collected data was entirely categorical. Hence, normal distributions are not expected in the collected data. To examine such type of data, nonparametric tests are appropriate. At first, Kruskal-Wallis test is performed to find out if there are any statistically significant differences in the responses among all five community groups. Then, as the second step, Mann-Whitney tests are performed as post hoc pair-wise comparisons among five community groups. Mann-

Whitney test allows checking statistical difference between two variables with nonparametric data. Since both Kruskal-Wallis test and Mann-Whitney test do not assume normal distribution, they are applicable for the type of data collected in this questionnaire survey. In the process of post hoc tests, there are multiple combinations for pair-wise comparisons; therefore there is a chance of having a false significance in the results. In order to correct such false significance appearance, Bonferroni or Holm-Bonferroni methods are traditionally considered. While at the same time, it is important to note that these two types of Bonferroni tests are generally considered too strict and increase the chances of false exclusions of significance. The literatures on Bonferroni corrections describe these two types of false interpretations as type I (having false significance by conducting multiple comparisons) and type II (excluding significance due to the strictness of correction methods) errors (Cabin & Mitchell, 2000; Green & Britten, 1998; Nakagawa, 2004). Cabin (2000) provides a comprehensive review on these two types of errors and concluded that the application of correction methods should be decided based on the context of the study rather than being correct or not in the methodological procedure. This discussion about how to handle correction methods for statistical tests is particularly important in those studies which apply mixed research methods. This is because when the field methodology is entirely based on statistical tests, then correction methods should be performed in order to avoid getting false significance. However, in the case of mixed research methods, such corrections can be made by those additional research methods. In this fieldwork in Kamikoani, semi-structured interview survey was also conducted as a method to collect detailed local contexts regarding the findings from the questionnaire survey. Therefore, it would be a more appropriate way of reporting the statistical tests by providing supporting information from the interview survey in this research.

4.3. Results

4.3.1. Profile of responded households

Figure 28 shows the age distribution of family members in respondents' households of the questionnaire. The survey covered 520 households of 1,266 residents which are

equivalent to 50.5 per cent coverage of the total population of Kamikoani. The proportion of age 75+ population appeared as the greatest at 28.9 per cent and age 65-74 proportion is 13.8 per cent. These two age groups represent 42.7 per cent of the studied population, which is equivalent to the actual proportion of age 65+ population of Kamikoani (45.5 per cent). Other age group distributions appeared also in similar figures as the village's demography.

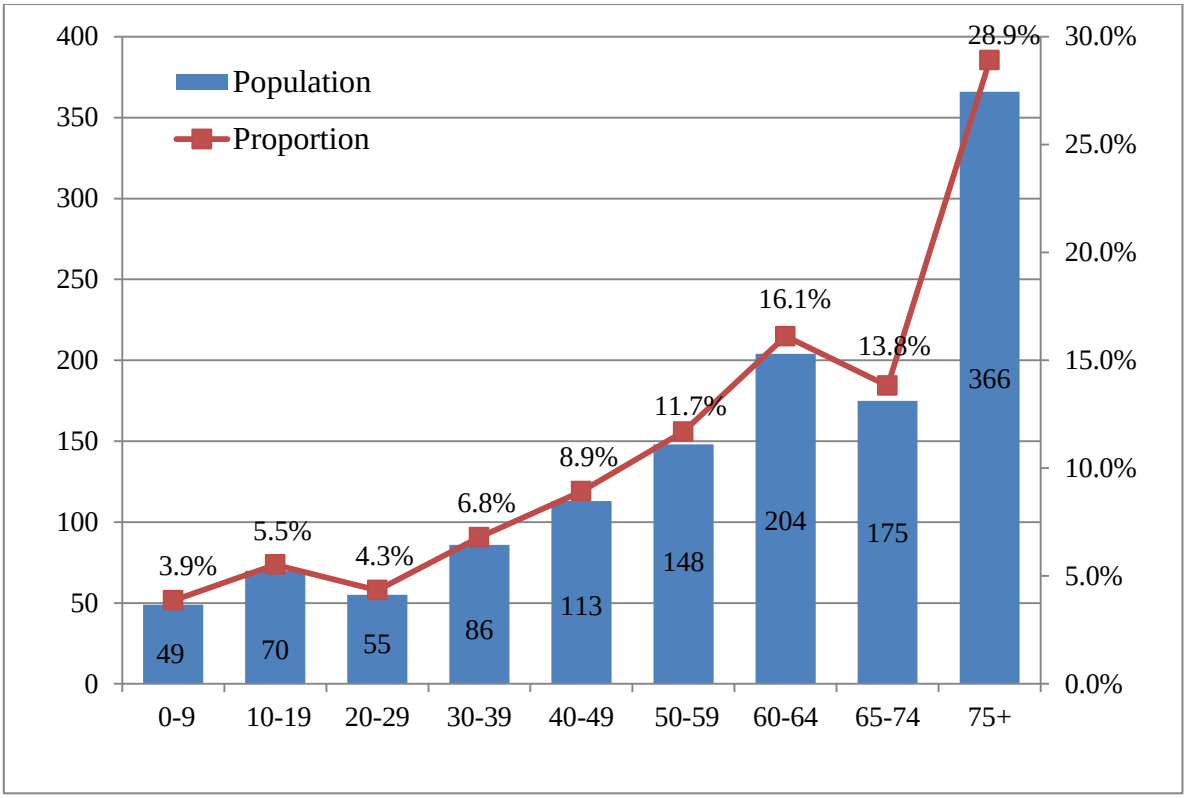

Figure 28 Population and their age groups in the responded households

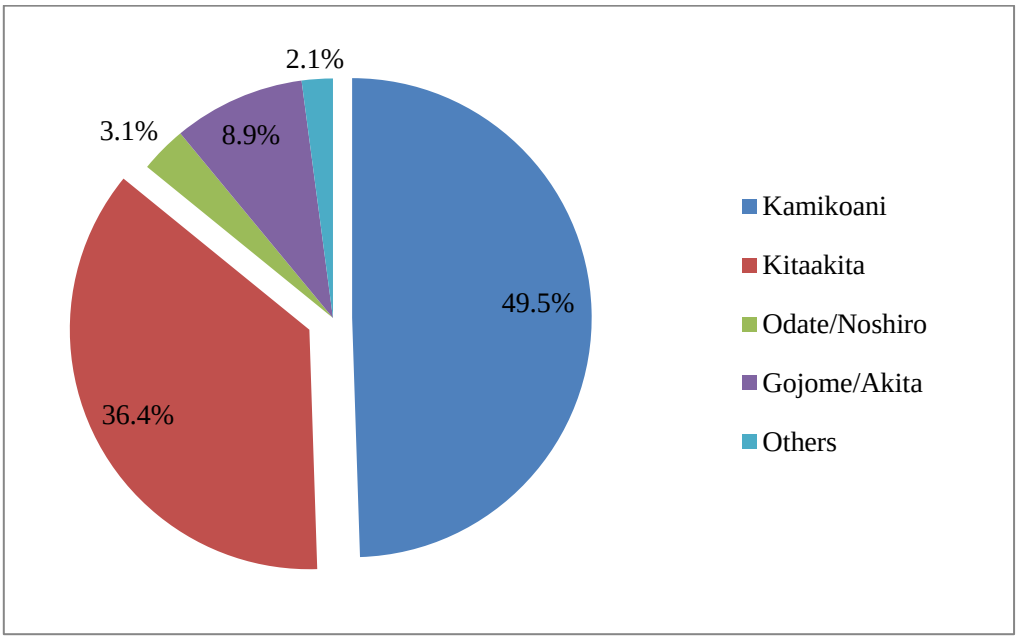

Figure 29 Working locations of households (N = 382 households)

The questionnaire asked the number of working population and their working locations. Out of the total responded 520 households, 382 households have working population. The total working population is 482. The difference between the total households for Figure 29 (382 households) and the total working population of responded households (482 working population) occurred since in some households multiple working residents are working in the same location.

The result suggests that 49.5% of the working population in the responded households have their jobs within the village, while the rest of the working population of Kamikoani has their jobs in outside of the village. Especially it is notable that 36.4% of working population is working in Kitaakita city which is located on the north of Kamikoani. The third largest proportion of working population is working in Gojome town or Akita city that is located on the south-west of the village. Overall the result suggests that the current state of employment in Kamikoani is largely dependent on the available job opportunities in the neighboring towns.

4.3.2. Transportation and access to basic services

In rural living environment, transportation is critical for the access to basic services such as grocery stores, hospitals, and public facilities. In general, rural households are required to travel longer distance to various services (DEFRA, 2012; Higgs & White, 1997; White, Guy, & Higgs, 1997). In addition, owning an independent transportation has a great effect on residents' feeling of independence; it would be a vulnerable situation for households if certain types of access are only available through a transportation means provided by others. Such a case is often observed with the households of only older residents.

4.3.2.1. Main transportation mean of households

To the question on the main transportation means of households, 70~80 per cent of respondents in all community groups said "Car driven by a member of household (shown as "Car (household)"in Figure 30)" is the main transportation of their households (Figure 30). In the case of Group 1, this response was slightly lower at 72.1 per cent and also it was lower in Group 5 at 78.9 per cent as compared to the other three groups.

Regarding the public bus service, it is used by about 6~10 per cent of residents in Group 1 to 4, yet there was no response for the same answer in Group 5. To all 20 communities of Kamikoani, public transportation service is provided with two major routes. The first route is for the internal transportation within Kamikoani and the second route is bound for Takanosu area of Kitaakita. Takanosu is the location of general hospitals and larger grocery stores. The bus fare for Takanosu is around 1,000~1,500 yen for one way (depending on from which community to take a bus). Such bus service is only from a nearby bus stop to each destination area; hence users of such public transportation need to walk from their home to the nearest bus stops and another walk from the bus stop of destination area to the final destination such as hospital or a supermarket. It may seem that such walks are general requirement for public transportation users, however, those walks could possibly hinder access to transportation for older residents who have difficulty in

walking. Such difficulty in walking becomes more challenging in the winter season when all roads are covered by snow.

To secure residents' access to transportation means, there is a local NGO which provides door-to-door transportation services to the villagers. This transportation service is operated by local volunteers who are trained to offer a ride by his or her own car to service users. This local NGO service is mostly used by older residents who are not capable to drive or who do not possess driving license. The service users tend to be female residents and they often lost independent transportation means as they started to live alone. The fare of this NGO transportation service depends on the traveling distance to destination; however it is set to be cheaper than public bus service if more than two users share a ride. Since there is no local station of taxi company in Kamikoani, it costs extra 1,000 yen just to call a taxi to the village from Aikawa area of Kitaakita. Therefore, this NGO transportation service is cheaper than using a taxi. The results of the questionnaire indicate that there is around 5 per cent of household who uses this NGO transportation service in Group 1 and 5, however it remained less than 2 per cent in Group 2 and 3, and 0 per cent in Group 4.

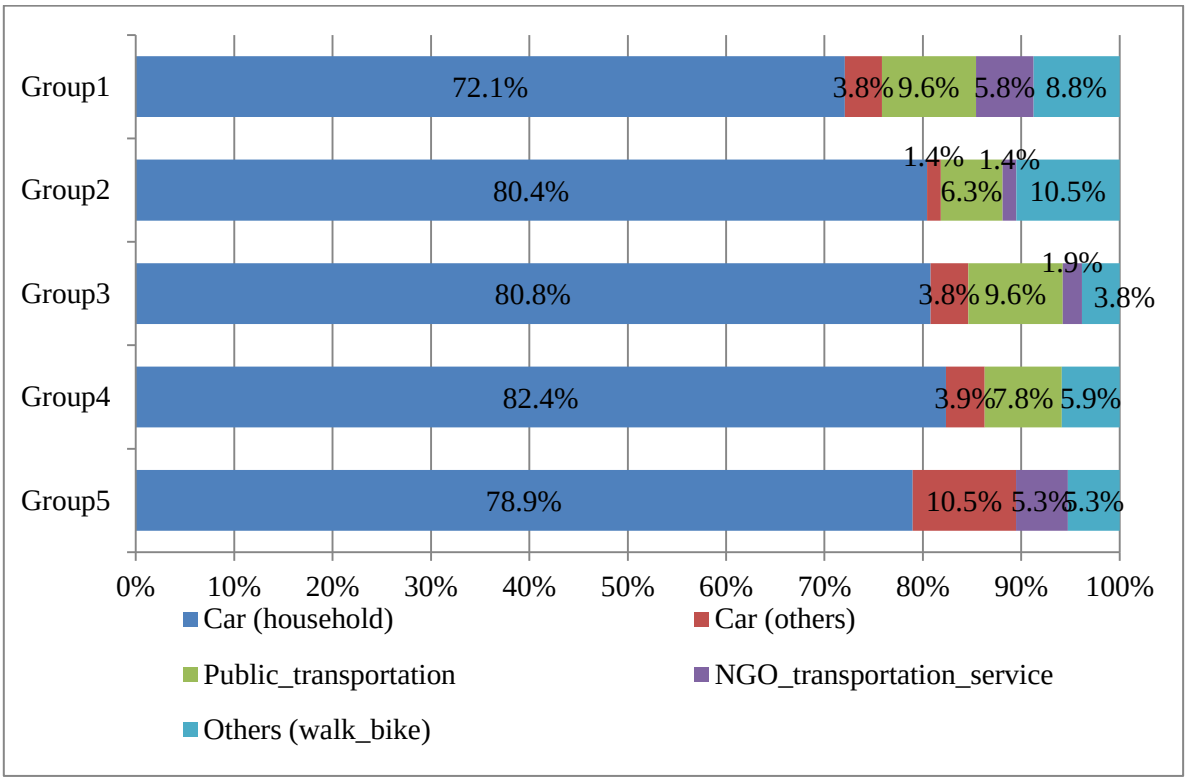

Figure 30 Main transportation mean of household

The results on transportation means of households suggest that cars are the predominant transportation means regardless of the difference of community groups. This point was also supported by a statistical test which examined all responses from the five community groups. Kruskal-Wallis tests suggest that there are no statistically significant differences in all responses in five community groups (Table 5).

Table 5 Result of statistical test on the main transportation mean among five community groups

	Car household	Car_others	Public transport	NPO_service	Others_walk_bike
Chi-Square	6.742	4.129	3.246	7.905	2.995
df	4	4	4	4	4
Asymp.Sig.	.150	.389	.518	.095	.559

4.3.2.2. Access to daily needs: frequency and access means

Grocery shopping is one of daily-based activities of household that is classified as a basic service that residents need a secured access. The questionnaire asked the main means and frequency of grocery shopping to households. In terms of the frequency of access to daily items, the majority of responses indicated "2-3 times per week" in Group 1 to 4 at around 50~60 per cent, while the same answer was chosen by 31.8 per cent of households in Group 5 (Figure 31). In comparison, 54.5 per cent of households in Group 5 responded "2-3 times per month". About this difference in the frequency of grocery shopping, group-wise comparisons were conducted by Mann-Whitney test. The results illustrated that there are statistically significant differences between Group 1 and 5 ($z=-2.155$, $p=.031$), Group 2 and 5 ($z=-2.137$, $p=.033$), and Group 4 and 5 ($z=-2.439$, $p=.015$). The difference between Group 3 and 5 did not appear significant ($z=-1.818$, $p=.069$). The results suggest that in general, households in Group 5 communities have less frequent access to grocery shopping.

Additionally, 11.2 per cent of household in Group 1 responded that they purchased daily items "almost every day" and this was higher than other groups. This result was also examined by statistical tests and appeared as significantly higher than other groups ($\chi 2(4)=14.099$, $p=.007$). Post pair-wise comparison proved that higher proportion of residents in Group 1 shop daily items at the frequency of "Almost every day" than the residents of Group 2 ($z=-2.926$, $p=.003$) and Group 4 (-2.055, $p=.040$) communities. This difference in the frequency of access to grocery is likely due to the locations of communities in Group 1 in which two general stores are available within a walking distance. In contrast, there was no response to this answer in Group 5. This is most likely due to the traveling distance to grocery stores from each location.

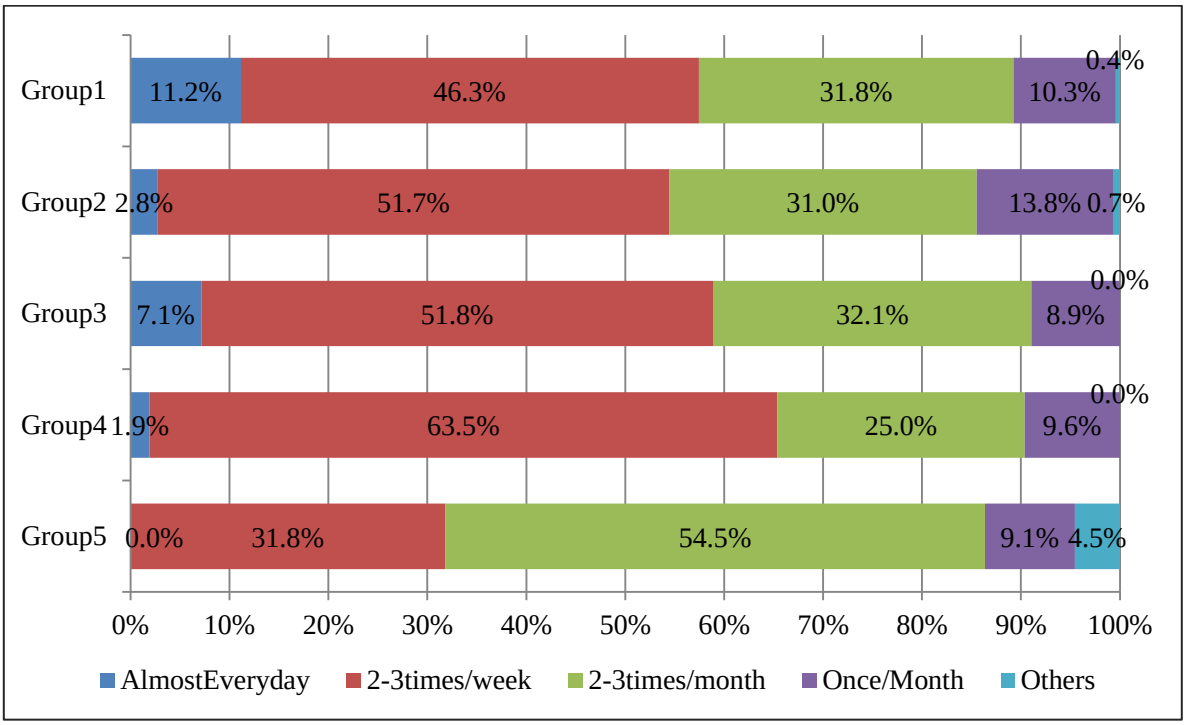

Figure 31 Frequency of access to grocery items

Regarding the access means of households to daily items, similar to the results of the main transportation means, about 80 per cent of respondents in Group 1 to 4 answered that they are "self-managing" which means that they travel to stores and purchase items by themselves (Figure 32). The same answer was chosen by 56.5 per cent of the households in Group 5 which is about 25 per cent lower than other groups. Instead, 33.3 per cent of households in Group 5 said that they use "mobile grocery stores[5]" as their main access to groceries. In other community groups, 4~11 per cent of the households are using mobile grocery stores. This difference was examined and the result of Kruskal-Wallis test suggests that there is a significant difference in the use of mobile grocery stores among five community groups (x^2 (4)=25.585, p=0.000). Following pair-wise tests revealed statistical significances between Group 1 and 5 (z=-5.357, p=.000), Group 2 and 5 (z=-2.91, p=.004),

[5] "Mobile grocery stores" is a type of grocery shopping service which brings products to the community of customers. This service is often offered by a local store and brings those grocery items with a van, so that the customers can shop without traveling far to the stores. The difference from a delivery service is that the customers do not need to request a delivery as well as those items they would like to purchase.

Group 3 and 5 (z=-2.699, p=.007), and Group 4 and 5 (z=-1.98, p=.048). These results prove that mobile grocery store is an important access means to basic items for Group 5 households. In addition, the same answer appeared also statistically different between Group 1 and 2 (z=-2.402, p=.016), and Group 1 and 4 (z=-2.516, p=.012). As we consider the fact that there are two small stores available within walking distance in Group 1 communities, it is likely that these two statistical significance appeared due to the lower figure in Group 1 at 3.3 per cent rather than that more households of Group 2 and 4 are considerably dependent on mobile grocery stores.

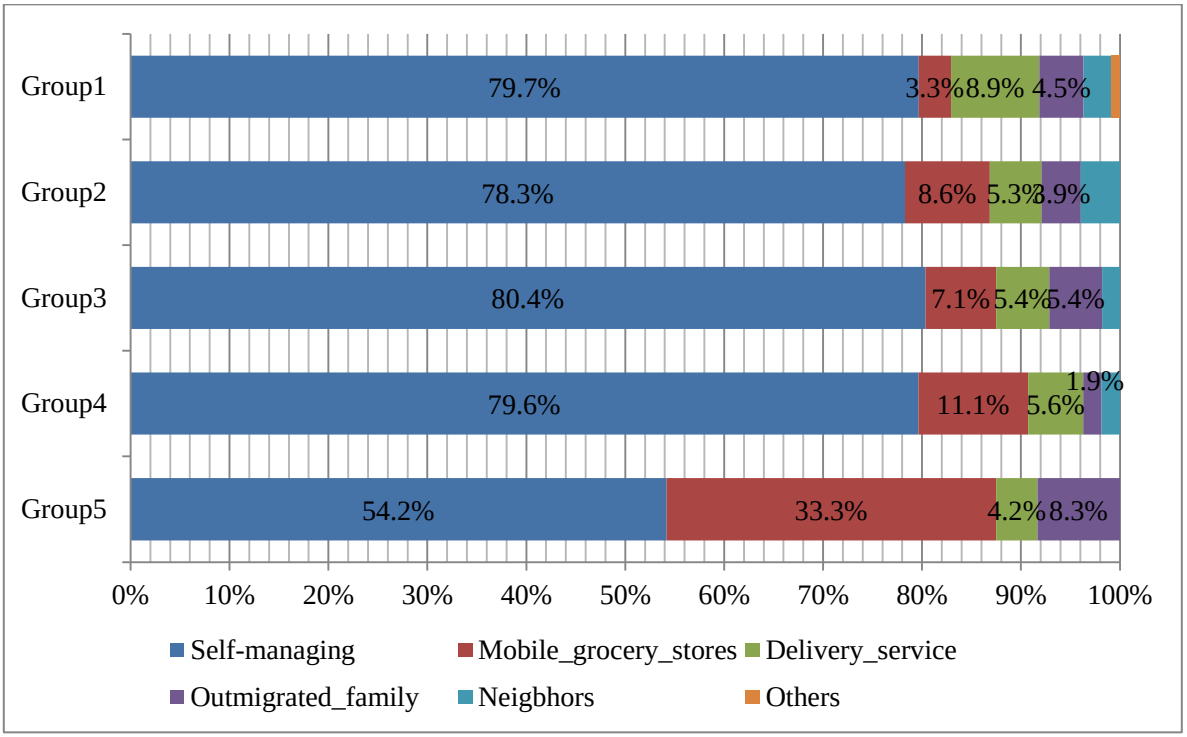

Figure 32 Main access mean to daily items

Although the results of questionnaire about transportation and access to daily items suggest that the majority of households use “Car (household)” at this moment, it is expected that the number of residents who become dependent on the types of transportation provided by others such as public bus service, lifts offered by neighbors, and NGO

transportation service will increase in the near future. This point is also inferred by the result of access means to grocery items; there are about 20 per cent of households in Group 1 to 4 who use other means to purchase daily items from "Self-managing" and 30 per cent of households in Group 5 use "mobile grocery stores". In other words, demand for such access means which do not require a trip to outside communities will be greater in the future. Reflecting such situation of transportation and access issues at the community scale, the key informants were asked to describe the current state of their residents in each community during the semi-structured interviews.

First, regarding those households who do not have independent transportation means, local leaders said that the common practice among them is that their relatives who live nearby or out-migrated family members visit regularly and take the residents to hospitals, grocery stores, and other destinations. In addition, with a few cases, their neighbors offer a ride; such case was mentioned by the leader of Group 4.

"There is a household of only two elderly residents in our community; they are both older than 75 years. Their children have already out-migrated to other cities, so they do not live close by, but their relatives are still in the village so I occasionally see them stop by and offer a ride to grocery shopping and hospitals in Kitaakita. I have also seen them using NGO transportation service but only a few times." (Leader of Shimobussha, Group 2)

"Many residents in my community use the free bus to the clinic to go to the grocery stores in the village central, but this is only for basic items. In some of the household, their relatives visit them occasionally and offer a lift to the central area of Kitaakita. I know some others who use NGO transportation service to go out for grocery shopping as well." (Leader of Minamizawa community, Group 5)

"I heard some residents in my community offer a ride to those residents who cannot drive to go out for hospitals and grocery stores in Takanosu. We know there is NGO transportation service available and that is really helpful, but I think it is important that we (community residents) cooperate and provide mutual support. Whatever the activity is, this mutual support will be very important for us as we are all getting aged now." (Leader of Nagashinda community, Group 4)

Second, regarding the type of travels, there are two main destinations which are, internal (within the village) and external (outside of village) destinations. The interviews with local leaders prevailed that different types of transportation services are used for internal and external destinations by those households who do not have independent transportation means. For the internal transportation, the main destination is the central area of Kamikoani which is the location of the town hall office, post office, and also the farmers' market and small shops for daily items. There is a free bus service provided by the town hall to the village's clinic. Since the clinic is located in the central area of the village, many of the bus users also visit other facilities at the occasion of medical checkups at the clinic. In the case of external destinations, there are two transportation means available; they are, public bus service and NGO transportation service. According to the leaders of communities, NGO transportation service is preferred particularly those older residents who need door-to-door transportation service. This service is quite helpful for those who use walking supportive devices, especially during the winter. Also, NGO transportation service is preferred because it can travel to multiple destinations in one trip. The most common pattern of the trip is that the users travel to a hospital for regular checkups and also to a supermarket for groceries. Following two comments from community leaders describe these two types of destinations well in details.

"About the transportation inside of the village, there is a free bus service for the clinic provided by the town hall. Those households who do not have independent transportation mean are using this bus service not only for going to the clinic but also to the local grocery stores and other places in the central area. There is public bus service available, however it is not frequent so that it is not so convenient to use. But if there is no public bus service, then we would feel unsecured in terms of accessibility to public transportation though there are not many people who actually use this service." (Leader of Oobayashi community, Group 2)

"If we use NPO transportation service, it only costs 1,000 yen to the central area of Kitaakita. However if we use the public bus it would cost at least 3,000 yen to the same destination. This much of cost of public bus would be a financial burden for those elderly households who only have national pension as their income source." (Leader of Shimobussha community, Group 3)

"Many of our service users travel to a general hospital either in Kitaakita or Akita with us. Then, on the way back to the village, they ask us to stop by a supermarket. This is the most common pattern of trip the users ask for. As long as the departure and arrivals are within the village, it is ok with our service to travel to multiple destinations in one trip. There is a store to bus daily items in Kamikoani, but many of them prefer to buy in a larger grocery store because they can find more variety of items." (Leader of NGO transportation service)

Aside from the ways to gain transportation means by the support of others, there was a talk about returning driving license to the town hall as residents start to feel unconfident about driving due to aging. In the coming decades, those residents who feel the same way are expected to increase. This point indicates that the importance of transportation service will be more pronounced as the aging of residents grows in the village.

"I think transportation and access issues are really fundamental for our living conditions, but at the same time, there are some residents in their 80s discussing whether they should return their driving license to the town hall or not since they are feeling unconfident about continuing driving a car. If there were younger members in their family or even just in our community, we could expect some support from them regarding this issue, yet the reality is different. I am very much concerned about the situation when many residents lose their own independent transportation mean and there is not any support for them in my community." (Leader of Oobayashi community)

About those households who do not have independent transportation means, some of the comments of local leaders suggest the importance of mobile grocery stores. The interviews first confirmed that mobile grocery stores come to all communities about once every three days and there are multiple stores that visit communities. In this system, besides those prepared items by the stores, the users can also purchase certain items upon requests. In that case, stores deliver the requested items to the customers at the next visit to the community. In addition, there is one delivery service available in the village, however it is not widely used at this moment.

"Those residents who can drive a car, they travel to neighboring towns or even further places for groceries and other items. But those who cannot drive, there is a grocery store in

walking distance, so they purchase daily items there. We also have mobile grocery stores that come to our community on regular bases, so they could also buy groceries from this store." (Leader of Nagashinda community, Group 4)

"Some residents in my community also use mobile grocery stores. They offer a variety of products and you can make a request as well, so you can get most of the items you need by this store. For those who can still walk to the central area of Kamikoani, which is about 30 minute by walk from our community, there is a grocery store there." (Leader of Oobayashi community, Group 2)

At the village scale, there are about 10 per cent of households who are dependent on the local stores and mobile grocery stores (about 100 households) in combination with the offered ride to neighboring towns by their relatives, out-migrated family members, and neighbors. As the number of older residents increase, the access to daily items will be a critical issue in residents' daily lives.

4.3.3. Property management

Properties in rural areas exist in various forms such as farmland, community forests and individual houses. Those community events and rituals that are related the local traditions can also be considered as intangible communal property that includes key local knowledge for resource management and disaster prevention. Since the questionnaire was targeting individual household, the management conditions of their farmlands, removing snow operation (regarding house management), and the types of community activities residents are interested in are investigated by asking about their current operations.

4.3.3.1. Types of farming operations

Farming is an important local production activity of rural areas. Although Kamikoani has high forest coverage (92.7 per cent), agriculture activity is still an important usage of land (552ha as of 2010). To find out the general trend of farming activities among the five community groups, the questionnaire asked about the current state of household in

terms of their farming operations. The results suggest some diversity among the five groups (Figure 33).

First, the majority of Group 1 community responded that they are "Non-farm" household, which consists 46.3 per cent of the total respondents. The proportion of "Non-farm" household response was lowest in Group 3 at 5.7 per cent and the rest of groups have 11~23 per cent of their respondents who responded with the same answer to this question. Second, among the all five community groups, Group 3 and 4 have relatively higher proportion of full-time and part-time farming households. The combined proportions of these two types are 37.5 per cent in Group 3 and 34.0 per cent in Group 4. In Group 5, 4.3 per cent of respondents answered that they are full/part-time farmers and this was the lowest among the all five community groups.

The questionnaire sets an answer option of "Self-consumption" which implies that the type of farming only for the self-consumption of household. In other words, it is a type of farming operation in a smaller scale, not as a source of income but for household consumption. The response to this answer was 56.5 per cent in Group 5 and this is about 20~30 per cent higher than other groups. This higher proportion of "Self-consumption" in Group 5 was confirmed as significantly higher by statistical tests with Group 1 ($z=-2.544$, $p=.011$) and Group 2 ($z=-2.400$, $p=.016$), however it did not appear as significant with Group 3 ($z=-1.268$, $p=.205$) and Group 4 ($z=-1.900$, $p=.057$).

Generally speaking, Group 1 is more of non-farming community group, whereas more households are engaged in farming regardless the type of full-time or part time in Group 3 and 4. They have about 30 per cent of their households being farmers for their income. At the same time, in Group 1 to 4, there are about 30 per cent of households being engaged in farming for their own self-consumption purpose. This type of farming appeared particularly higher in Group 5; this implies that farmlands in Group 5 are largely maintained by the smallest scale of farming.

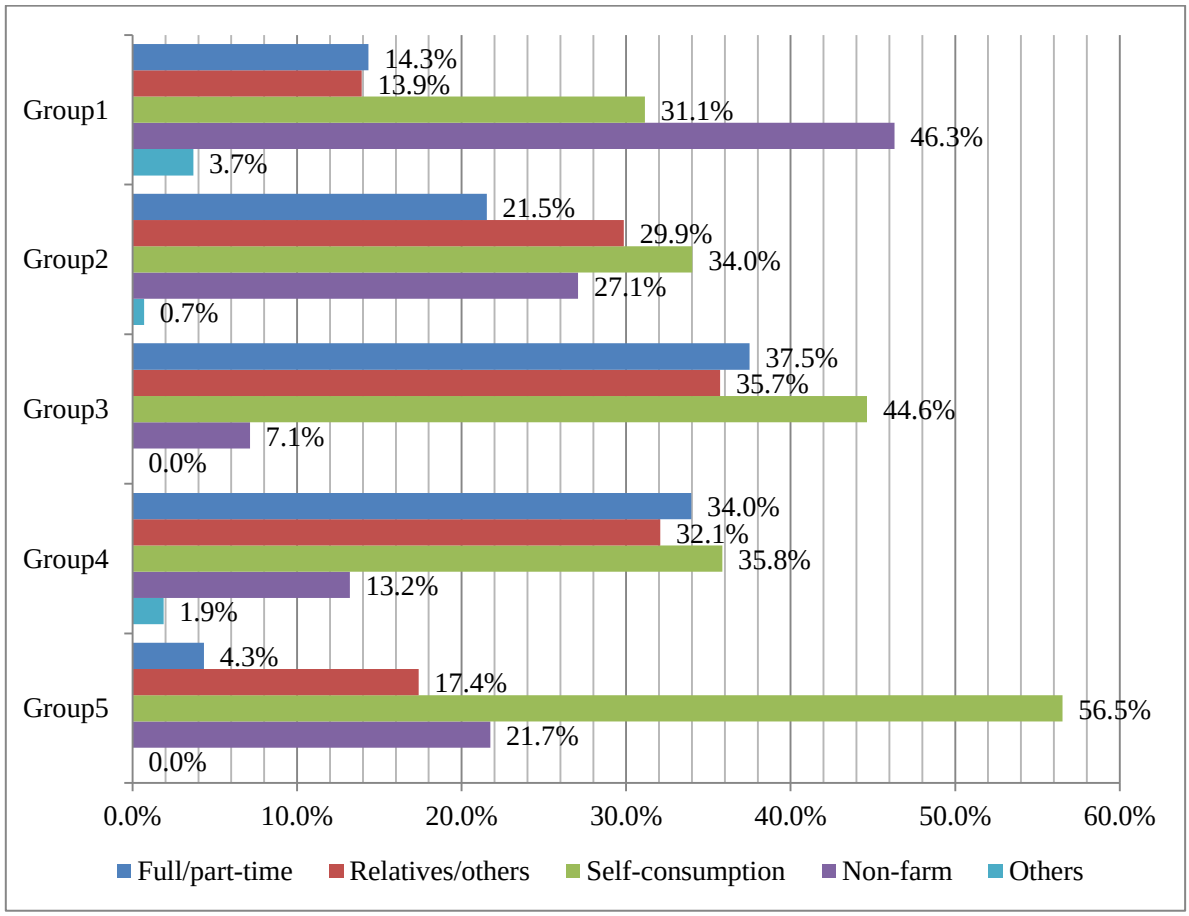

Figure 33 Types of farming operations

Note: Multiple answers possible since some households have more than one types of farming operations

4.3.3.2. Management of abandoned farmlands

By asking the current farming operation of households, the questionnaire survey grasped the current management of farmlands which are cultivated. However the other emerging issue regarding the farmlands is abandonment. The management of farmlands has been a critical issue in Kamikoani as most of the farmers are getting old and many of the households face a difficulty in succession of their properties including farmlands to younger generations. An increase of abandoned farmlands causes various local challenges in terms of landscape and natural disaster management (Picture 1).

In all the four communities that were interviewed, community leaders said that there are several rice paddies which are being abandoned or close to being abandoned. However, these are in different state of abandonment according to their explanations, and in all cases the relatives or out-migrated family members of the original owner household are mowing grass or plant other types of crops to keep the soil. Such situation of farmlands is described by the local leaders in the following comments:

"There are many cases that the relatives or out-migrated family members of owner households are managing the fields. They mostly cut grass only, not producing anything. We cannot leave the field if it is a paddy field (because the field will lose the capacity to hold water quickly). In some cases we just plant something and leave it until the end of farming season (without harvesting)." (Leader of Oobayashi community. Group 2)

"We do not have large size farmlands originally because our community is located slightly inland part of the village, so the management of them is probably easier than the other communities. Currently we have some households who cannot maintain their farmlands by themselves but they are asking other household within our community to cultivate. This piece of farmland is used for rice production, so it is well maintained at this moment. So far we are able to manage all the farmlands in our community." (Leader of Shimobussha community, Group 3)

"If the farmland is rice paddy, we cannot simply abandon it because it requires more maintenance. In that case we ask other farmers to make rice or only do mowing by themselves to keep the field with the minimum quality (there are several steps before the complete abandonment of paddies)." (Leader of Nagashinda community, Group 4)

"Currently, there are no farming households in our community, though there are some residents who do small gardening for self-consumption purpose. We have several households who become aged and stop faming. These households are lending their farmlands to either a larger faming household from other communities or ask Japan Agriculture (JA) office to find another farmer to cultivate the land, but we aren't sure how long we can manage these abandoned fields in this way because those who are asked are also getting aged and do not have successors." (Leader of Minamizawa, Group 5)

In addition, there were some comments on the rice acreage-reduction policy by the central government. On the one hand, local residents are facing a difficulty to maintain their farmlands for production due to aging and succession issue at individual household, but on

the other hand, they consider the current policy scheme as somewhat important incentive to maintain their farmlands.

"Because there has been rice acreage-reduction policy by the national government, we have planned buckwheat, beans, and other types of products. There were some cases that they only plant but did not harvest at all. Once rice acreage-reduction policy is changed and removed completely, we are not sure what to do with those farmlands that we are barely managing at this moment" (Leader of Oobayashi, Group 3)

"The current administration of our government is trying to terminate rice acreage-reduction policy within a few years time. This policy change to us means that those small scale rice paddies are no use because they cannot produce a large amount of rice. However, the tasty rice comes from these small paddies located in the mountainous areas because the water quality is better. We know the value of rice from these small size paddies but it is extremely difficult to run farming business with these small scale fields. That is why no one wants to cultivate the small paddies we have in our village. But once rice acreage-reduction policy is removed, it will be even more difficult to maintain those small paddies" (Leader of Minamizawa community, Group 5)

One of the possible risks regarding the increase of abandoned farmland is natural disaster, particularly landslides and floods. There was one area in Oobayashi community where residents are feeling this possible risk of natural disasters.

"We have some paddy fields which are only mowed and no rice or other types of crops are planted in Oouchizawa area within our community. This area is a long and narrow area in between mountains so that at the occasion of heavy rains, there is a lot of water that comes into this small space from the mountains. If these paddy fields are maintained properly, we do not need to worry about the risk of landslides or floods but now many of the farmlands in this area are close to be abandoned. Especially, there is one small space of paddies right next to a slope with large size cider trees. This section of cider forest is not well maintained also due to the aging of residents. So I am quite worried about possible risk of natural disasters in combination of poor management of forest and paddies, at the occasion of heavy rains that we sometime have in our village." (Leader of Oobayashi, Group 3)

4.3.3.3. Removing snow

Kamikoani has heavy snowing climate in winter, therefore removing snow is an important maintenance work of individual houses. In order to capture the current management situation of individual houses, the survey also asked how each household is managing the removal snow. Between 70~80 per cent of the households in Group 1 to 4 responded that they are "Self-managing", which means members of the household are doing this task by themselves (Figure 34). In the case of Group 5, the same response was lower at 65.2 per cent. However this is not statistically different from the other groups ($\chi 2(4)=8.082$, $p=.089$). Instead, 21.7 per cent of households in Group 5 said that they ask for support from their "Neighbors", and 13.0 per cent said they ask "Out-migrated family" members to take care of this task. These responses which are requesting supports of others appeared 5~10 per cent higher in Group 5 than other community groups. While the proportion of "Neighbors" response in Group 5 is not statistically different from the other four community groups ($\chi 2(4)=2.990$, $p=.559$), the responses to "Out-migrated family" appeared differently among the five community groups ($\chi 2(4) =13.238$, $p = 0.010$). Post hoc pair-wise comparisons prevailed that there is a higher proportion of households who ask their out-migrated family members to support with removing snow in Group 5 compared to Group 1 ($z=-3.258$, $p=.001$), Group 2 ($z=-2.238$, $p=.025$), and Group 4 ($z =-2.640$, $p=.008$).

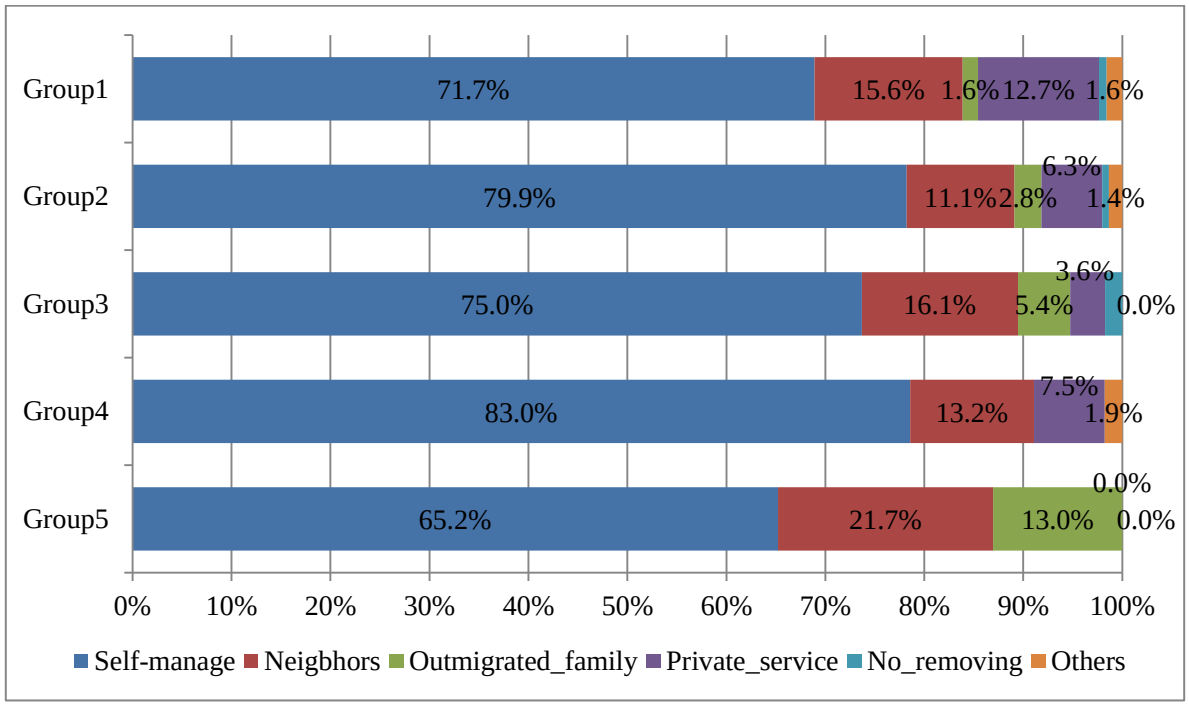

Figure 34 Removing snow operations at the household

The town hall of Kamikoani realizes the difficulty in removing snow, particularly at the households of older residents. For such situation, the town hall leases a snow blower to each community without any charges. The communities who lend a snow blower need to register the persons in charge of its operation, and the cost for its gas and the wage for the operator need to be managed by each community. Regarding the way to handle this management of snow blower, there was a difference among communities that were interviewed. Group 2 to 4 utilized this free snow blower with setting own rules, however in the case of Minamizawa community, which is in Group 5, it is not used because the management scheme of this machine is somewhat troublesome to the community. Such differences are well illustrated in the following comments from the local leaders.

"We discussed about the ways to manage this snow blower from the town hall at our community gathering and decided that the gas and wage for operator should be paid by those households who requested for support. We agreed the wage for operator as 1,000 yen per time." (Leader of Oobayashi community, Group 2)

"We do not have any volunteer support among neighbors in removing snow task in our community, but we utilize the snow blower from the town hall. We asked two persons in our community to be operators and the cost including wage for the operator is covered by individual houses that use this service. We do not think it is a good idea to have support on removing snow for free (there should be a payment for the support even it is a little amount)." (Leader of Shimobussha community, Group 3)

"We are thankful for the free snow blower from the town hall. We utilize it to remove snow in our community center and other common places. Also, when some residents ask for support, this machine is utilized by the operators. This service is offered for a charge and the payment is to cover the gas and the wage to the operator only. We set our rules about the operation of this machine in our community gathering. First, we decided two persons will be operators. We do not want many people to use this machine because some people may operate it in the wrong way and cause technical troubles. This machine could cause an accident too, so we agreed to ask those two residents who know the operation very well. The second rule was to have insurance for the operators and this cost is covered by our community group." (Leader of Nagashinda, Group 4)

"We told the town hall that we do not want to lend this snow blower because the management of this machine would be another difficult task for us. In fact, some households in our community already have snow blowers, so we can utilize our own machines to give support to our neighbors when it is needed. Also, in our community, the distance between each house is a bit too far to travel with a snow blower, so transferring the machine from one place to the other would be a hassle for us unless we have a small truck. We simply found the management and operation of this machine would be a difficult task for us. " (Leader of Minamizawa, Group 5)

The interviews also asked about the cases of households of older residents regarding snow removal. It is because snow removal is a physically demanding task and often these households need support from others on this task. Especially, households in Kamikoani need to remove snow form their rooftops once or twice in one winter season, otherwise the accumulated snow on the rooftop may cause some damages to houses. In the case of abandoned houses, they often collapse because of the weight of accumulated snow on the rooftop. In the responses to this question about the snow removal task at the older residents' houses, leaders of Nagashinda and Minamizawa communities described the general changing conditions of maintenance work in their communities as follows:

"Actually, it is not only about removing snow. We tell each other that it is alright to downsize certain types of daily chores which we find difficult to continue with the same scale and quality as in the past. As we get aged, it becomes difficult to do some physically demanding tasks such as mowing grass and removing snow. If that is the case, we can simply downsize the scale of the task. We cannot stop doing such tasks since they are related to our living environment, so the principle in our community is that individual households try as much as they can, then we can all do the rest of the tasks collectively. I think such mutual support and collective operations are the key to maintain the connection among the residents, so it is not just about the increase of physical works we need to do in our community. I see such collective actions as a good opportunity for us to be linked with each member of our community. (Leader of Nagashinda community, Group 4)

"I think it is not necessary to remove all snow because it is not the case that we go out every day. Generally speaking, I think we do not need to do every maintenance work related to housing perfectly and make everything look neat all the time. Also, just because some households cannot do certain chores such as removing snow, I do not think it is a good idea to offer full support. I mean, we support each other but only to the extent of works that the household needs support. If we take over those daily choirs completely from them, they get both physically weaker and become mentally dependent on others. I think we do not want to have such a situation in our community. (Leader of Minamizawa community, Group 5)

In relation to the task of snow removal, the semi-structured interviews also asked about the management of abandoned houses in their communities, particularly about removing snow. Houses are generally considered a private property, so it is difficult to be managed collectively by the community members. Such situation can also be seen from the following comments:

"There is a house in which no one is living right now. In winter, this house is completely covered by snow, so I am worried if it would collapse one day. If no one is in the house during the winter, it means no heating is used. This makes the covered snow even more difficult to melt or slide down from the roof. I am also worried about getting fire from this house. I know relatives of this household visit occasionally to check the condition, but I am quite worried." (Leader of Oobayashi, Group 2)

"We have one house in which no one is living at this moment, but a member of this family visits time to time for the maintenance. So it is well managed at this moment but we are not sure how long this house can be kept in this way." (Nagashinda community, Group 4)

"There are two abandoned houses in our community. One of them is located on the east side of our community and has been maintained by the relatives of the original family who were living in this house. We saw that some snow was removed from the roof, so I believe they come to the house sometime to maintain the houses." (Leader of Minamizawa, Group 5)

Picture 1 Abandoned farmlands and houses in Kamikoani (Pictures by the author)

Note: Four pictures on the left hand side show different states of abandoned fields. Two pictures on the top left are the paddy fields only being mowed. The other two pictures on the bottom are the fields converted to other types of crops. The other four pictures on the right hand side show abandoned houses in the village. The one on the bottom right hand side shows construction materials of a house left after being dismantled.

4.3.3.4. Shortage of manpower

One of the common challenges across rural communities today is the shortage of manpower in various dimensions of local activities such as maintenance of public facilities, succession of private properties, and holding local events. Such difficulty is fundamentally caused by the continuous depopulation, especially by the outward migration of young population, making various local activities difficult to maintain. Such a situation is further accelerated by ageing of the remaining residents**.**

The questionnaire asked the types of activities that households are experiencing the shortage of manpower. In Group 1 to 4, about 25~50 per cent of the households responded "Removing snow" as the main activity they find a shortage of manpower while there are 77.3 per cent of respondents in Group 5 who chose the same answer option (Figure 35). The result of Kruskal-Wallis test proved that there are statistical differences among the five community groups on this question ($\chi^2(4)=24.622$, p=.000). The following pair-wise comparisons found that more residents of Group 5 are feeling shortage of manpower in snow removal compared to Group 2 (z=-2.060, p=.039), Group 3 (z=-2.627, p=.009), and Group 4 (z=-3.772, p=.000), yet no statistical difference was found between Group 1 and 5 (z=-1.721, p=.085).

Another local activity that residents commonly experience a shortage of manpower is the management of properties and organization of local events. These types of local activities are particularly influenced by the decline of young population as they are the main members needed to form a group to take care of these activities. Among Group 1 to 4 communities, 33~43 per cent of respondents answered "Managing property and events" as an activity that they feel a shortage of manpower while only 13.6 per cent of respondents in Group 5 chose the same answer. Although there was no statistical difference found among the five community groups by Kruskal-Wallis test on this answer option ($\chi^2(4) =8.586$, p = .072), pair-wise comparisons illustrated that there are a significant difference between Group 1 and 5 (z=-2.221, p=.026), Group 2 and 5 (z=-2.754, p=.006), and Group 4 and 5 (z=-2.443, p=.015).

Respondents of Group 3 and 4 reported that they find "Farm operation" as an activity that they feel shortage of manpower at 13.6 per cent and 16.1 per cent respectively while in Group 1, 2, and 5 this answer was only by less than 5 per cent households. These results are well reflecting the results on the type of farming operation; the fact that the proportion of full-time and part-time farmers are higher in Group 3 and 4 imply that more residents feel shortage of manpower in their farming operations.

Lastly, the responses of "Chores and cleanups" did not appear to be greatly different to each other although the response to this answer was 5.3 per cent in Group 5 communities, but only appeared statistically different between Group 1 and 3 (z=-1.967, p=.036), yet not in between Group 1 and 2, and Group 1 and 4. Among them, 20~30 per cent of the respondents chose this answer option.

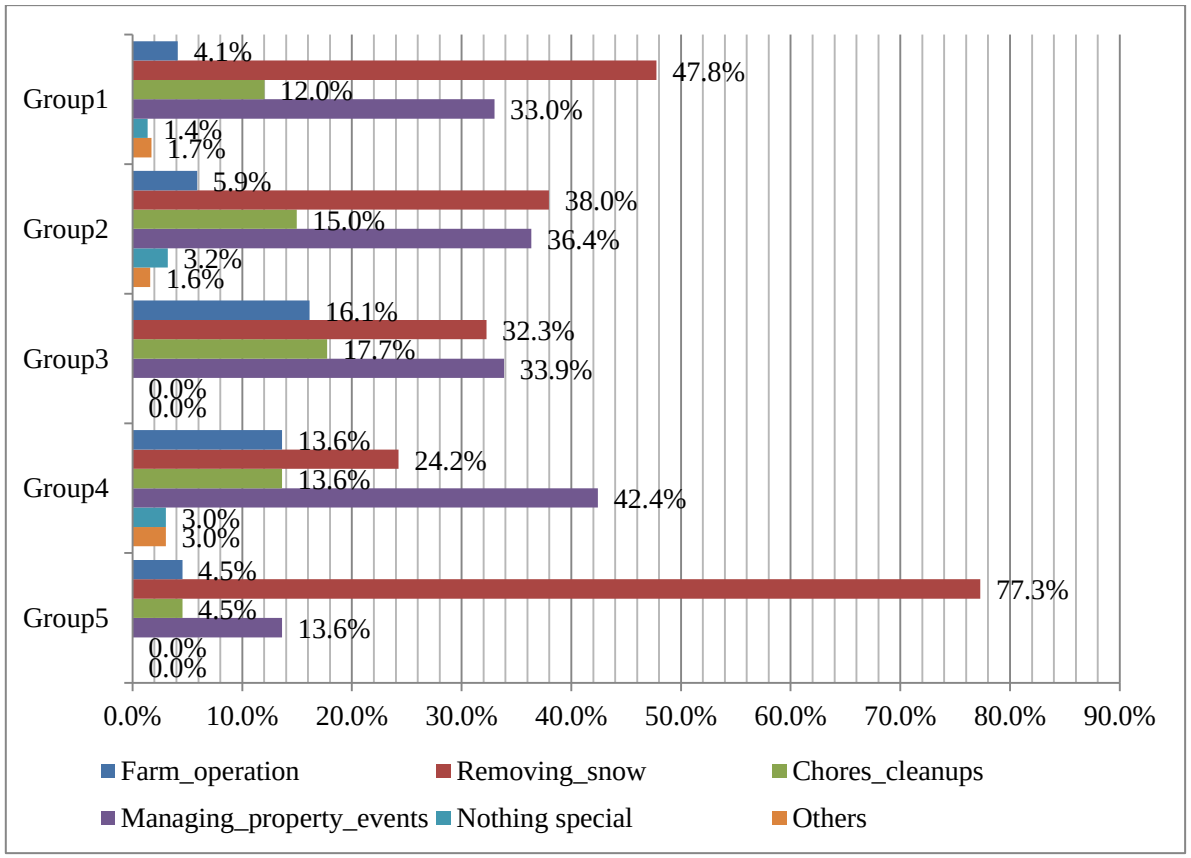

Figure 35 Types of activities that residents feel shortage of manpower

4.3.4. Economic status: income satisfaction level of household

In order to examine the state of rural communities in terms of economic dimension, the questionnaire inquired income satisfaction level of households. The provided answer options are “Sufficient”, “Sufficient but want additional part-time job”, “Neither sufficient nor insufficient”, “Insufficient and need additional part-time job”, and “Insufficient and need additional full-time job”. The answer of “Sufficient but want additional part-time job” is integrated with “Sufficient” for the purpose of analysis.

Among all the five community groups, the majority answer was “Neither” which implies that the household is not fully satisfied with the current income level, yet it is not in the degree of insufficiency for the general living of household. These two answer options “Insufficient (part-time)” and “Insufficient (full-time)” mean that the current level of household income is insufficient so households wish to have an additional part-time job level income or a full-time job level income respectively. The proportion of those household who expressed insufficient level of income (sum of insufficient with part-time and full-time options) appeared 45.4 per cent in Group 5 while it is around 20~24 per cent in Group 1~4 (Figure 36). In addition, it is important to note that there was no household who answered “Sufficient” in Group 5 while there are around 10~15 per cent of household who feel sufficient about their current income level in Group 1 to 4.

All five answer options are examined by Kruskal-Wallis test and the results suggest that there is statistical difference among the five community groups in the response of “Insufficient (fulltime)” ($\chi^2(4)=14.246$, $p=.007$). This was also checked by post-hoc tests that prove higher proportion of Group 5 residents are feeling insufficiency with their income to the degree of needing additional full-time job compared with Group 1 ($z=-2.154$ $p=.031$), Group 2 ($z= -3.582$, $P=.000$), and Group 3($z=-2.877$, $p=.004$).

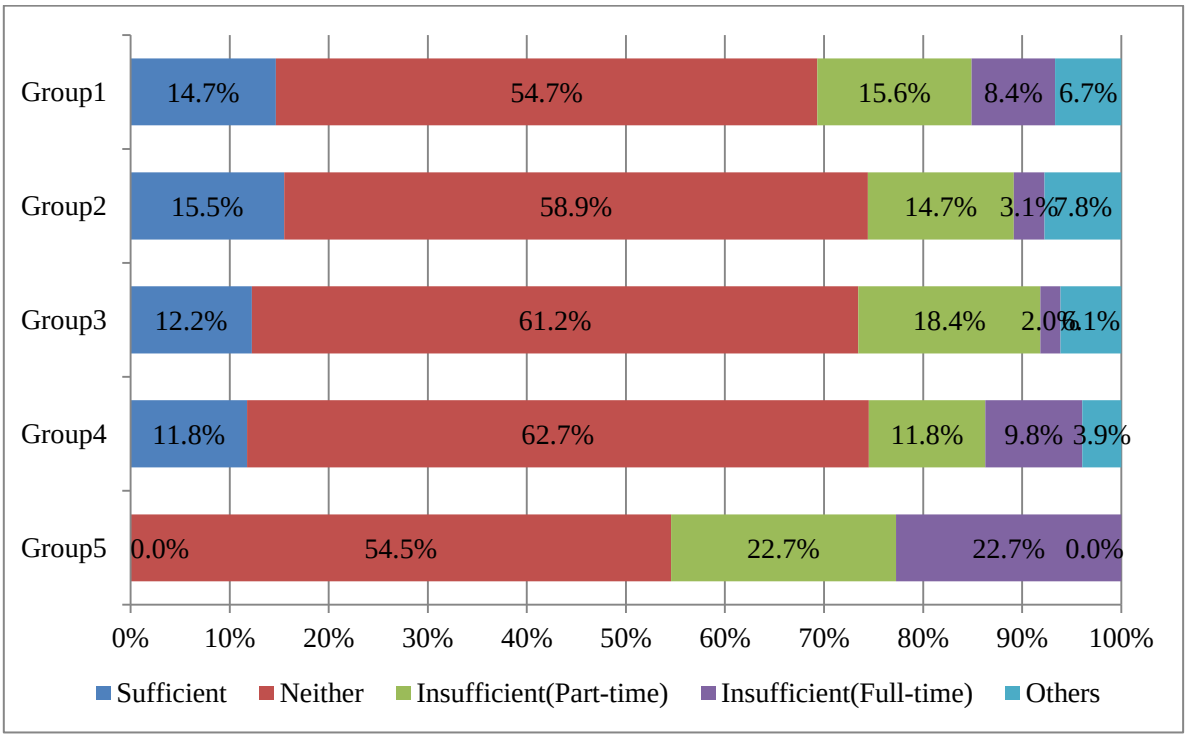

Figure 36 Income satisfaction level at household

Note: "Sufficient but want additional part-time job" is integrated with "Sufficient" for analysis). Other answer options are shown as follows: "Neither sufficient nor insufficient" as "Neither", "Insufficient so that need additional part-time job" as "Insufficient (Part-time)", and "Insufficient so that need additional full-time job" as "Insufficient (Full-time)".

4.3.5. Social relationships among residents

In rural areas, social relationship based on family and neighborly ties are considered as an important factor to maintain practical management of local resources and also to sustain social vitality at individual communities.

4.3.5.1. Person to consult with when encountering a trouble

To examine the type of social relationships among the five community groups, the questionnaire asked to whom residents consult with when they have concerns or any kinds of problems in their households. The majority of answer appeared in "Relatives" among all community groups, however it was about 60 to 65 per cent in Group 1 to 4, whereas it was

lower at 47.8 per cent in Group 5 (Figure 37). This difference in answering “Relatives” is tested by Kruskal-Wallis test which suggests that there are statistically significant differences among five community groups ($\chi 2(4) = 10.184$, $p = 0.037$). Post hoc pair-wise comparisons suggest that Group 4 has higher proportion of this answer than Group 1 (z=-2.16, p=.030), and Group 5 has statistically lower proportion than the figures of Group 2 (z=-2.26, p=.024) and Group 4 (z=-2.71, p=.007). Instead, in the case of Group 5, 43.5 per cent of respondents answered “None” which means they do not consult with anybody. This answer illustrates certain degree of detachment in social relationships. The same response was chosen by 20~23 per cent of respondents in Group 1 to 4. This difference was also examined by statistical tests and appeared as statistically significant between Group 5 and 1 (z=-2.044, p=.041), Group 2 (z=-2.183, p=.029), and Group 4 (z=-2.075, p=.038). The other responses to “Neighbors”, “Care workers”, “Town hall” and “others” were all less than 10 per cent.

These results do not fully imply that significantly less proportion of households in Group 5 are not consulting with anyone at the occasion of having concerns at their households, but it can be said that residents in Group 5 communities take a different pattern of handling issues.

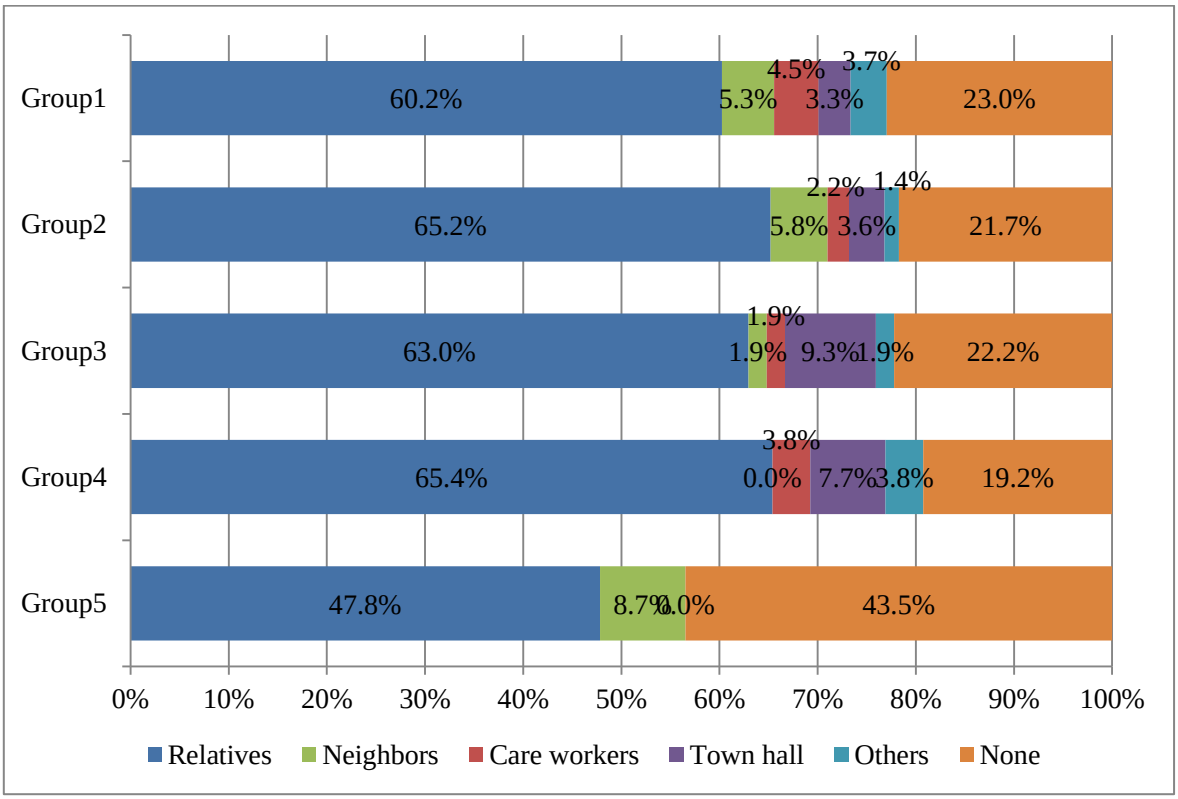

Figure 37 Social relationships: to whom do you consult with when you have any concerns or troubles at your household?

4.3.5.2. New local activities for regional regeneration

The town hall of Kamikoani has been active in organizing regional regeneration initiatives. One of such events is Kamikoani Art Project which was held during the summer in last three years since 2010. Those regeneration initiatives are to revitalize the vitality of regional societies by conducting various forms of projects for tourism, product development, and other local activities. Although there is no unified definition of regional regeneration, such projects tend to address economic and social aspects of the target area and emphasize the establishment of network with outside stakeholders. As such, local initiatives for regional regeneration are considered critical for the future state of Kamikoani. The questionnaire asked the types of activities that residents are interested in or think are important for their village. Additionally, this question was asked to examine how much

each household is interested in forming new social relationships by conducting certain types of regeneration initiatives.

The provided answer options were “Farmer’s market”, “Eco-tourism”, “Utilize abandoned farmlands”, “Revitalizing local festivals (shown as “Local festivals” in Figure 38), “Creating a gathering place”, “None”, and “Others”. To this question, 25~40 per cent of the households expressed their interest in working in the local farmer’s market among all five community groups. This was especially highest in Group 5 at 43.4 per cent. The second largest response was found in “Creating gathering place” for residents, in which 20~30 per cent of households are interested. While the farmer’s market is more for small scale economic activities, a gathering place is more for the welfare of people. The idea of this answer is to create a physical space in one of the public facilities such as town hall, clinic, or community center and make this place available for all villagers. The aim of having a gathering place is to facilitate communication among the villagers regardless of the community they reside. Respondents in Group 5 expressed their interest on this idea with 30.4 per cent which was highest among all the community groups. It was also high in group 2 at 27.1 per cent and Group 1 at 24.2 per cent. There was about 11~30 per cent of the residents who are interested in “Eco-tourism” promotion and “Utilization of abandoned farmlands” in Group 1 to 4, while at the same time the responses to these two answers appeared higher in Group 5 at 30.4 per cent and 26.1 per cent respectively. In order to test the differences of all answer options, a Kruskal-Wallis test was conducted, however there was no significant difference found regarding the answers among the five community groups as shown in Table 6.

While many of the households expressed their interests in these new activities, between 30~40 per cent of households in Group 1 to 4 chose “none” for their answer. In the case of Group 5, there were 26 per cent of the households who chose the same answer. This implies that there are a certain number of residents who are not interested in joining any of regional regeneration activities in the village.

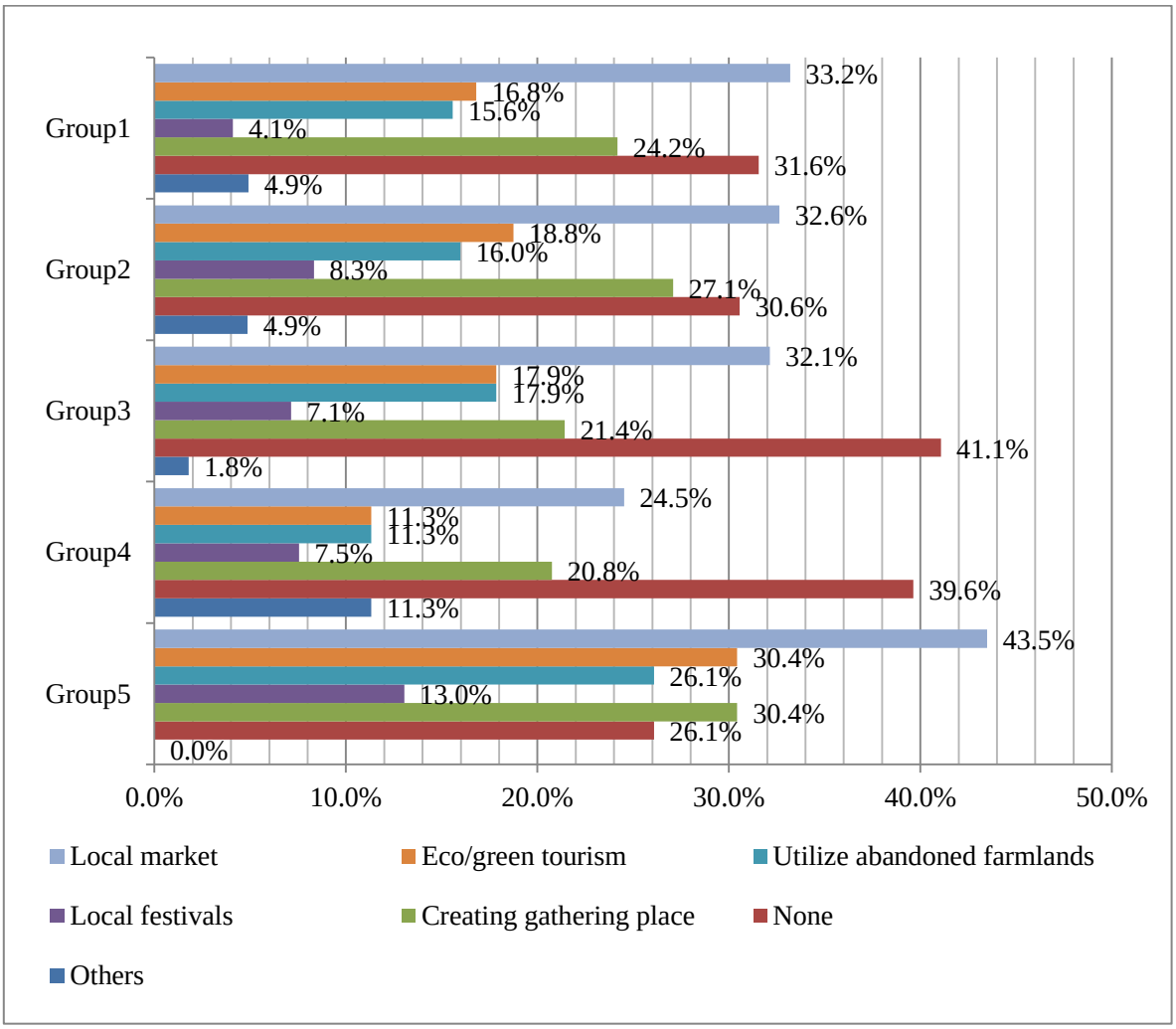

Figure 38 Regional regeneration initiatives that households are interested in or think are important for Kamikoani

Note: multiple answers possible

Table 6 Result of Kruskal-Wallis test for regional regeneration initiatives

	Local Market	Tourism	UtilizeAbandonedFarms	LocalFestivals	Gathering Place	NthSpecial	Others
Chi-Square	4.368	5.479	3.636	5.288	2.234	3.386	6.877
df	4	4	4	4	4	4	4
Asymp.Sig.	0.358	0.242	0.457	0.259	0.693	0.495	0.143

4.3.5.3. Out-migrated family members

In addition to the internal social relationships within communities and the village, the relationship with out-migrated family members is considered important for households as they often provide a variety of support on regular bases. This research assumes the closer the residence distance is, is the more likely the variety and frequent support is provided to households by the out-migrated family members. Therefore, the questionnaire asked the residence location of out-migrated family members. Out of 520 returns, 341 respondents said that they have at least one out-migrated family member (65.6 per cent).

The results show similar patterns among Group 1 to 4; however responses of Group 5 household illustrate a different pattern (Figure 39). Among Group 1 to 4, the two main responses are "Akita city" and "Other prefectures". These two responses consist of 23~36 per cent and 21~29 per cent respectively. There are about 10~17 per cent of households who responded "Other places within Akita" in Group 1, 3 and 4; however this response was slightly lower at 6.4 per cent in Group 2. Among Group 1~4, those responses to "Kitaakita" was relatively lower at 8~13 per cent. Similarly, their response to "Kamikoani remained 6~12 per cent.

In contrast, the responses of Group 5 appeared in a different pattern. The highest response was "Akita" at 42.3 per cent which is about 10~20 per cent higher than other groups. Also, the response to "Kamikoani" was 15~20 per cent higher than other groups at 26.9 per cent. Instead, there is a lower proportion of response to "Other prefectures" at 15.4 per cent. These differences in responses of Group 5 from those of Group 1 to 4 are examined by statistical tests.

At first Kruskal-Wallis test suggest that there are significant differences in the response of "Kamikoani" ($\chi^2(4) = 17.962$, $p = .001$) and "Other places within Akita prefecture" ($\chi^2(4) = 11.055$, $p = .026$) among five community groups. Secondly, post hoc paired-wise comparisons suggest that there are more households which have their out-migrated family members within Kamikoani in Group 5 compared to Group 1 ($z=-4.171$,

p=.000), Group 2 (z=-2.966, p=.003), and Group 4 (z=-2.762, p=.006). Additionally, there are statistically significant differences between Group 1 and 2 (z=-2.609, p=.009) and Group 2 and 3(-2.266, p=.023) in "Other places within Akita prefecture" response. Those households with their out-migrated family members living in Akita city is also greater in Group 5 compared to Group 1 (z=-2.437, p=.015), Group 3 (z=-2.164, p=.030), and Group 4 (z=-1.966, p=.049). Although the response of "Other prefecture" of Group 5 seems apparently lower than other community groups, no statistical difference was found (Kruskal-Wallis Test: $\chi^2(4) = .0379$, $p = .984$).

From these results, it can be said that the out-migrated family members of Group 5 households tend to remain in Kamikoani and Akita city compared to other groups. This situation is critical for sustaining certain local activities in Group 5 as they have higher dependency on transportation and access to daily items. It may be the case that such support provided by out-migrated family members may not be well captured by quantitative method. However, the fact that they are staying in close locations may provide a good sense of security to those households in Group 5.

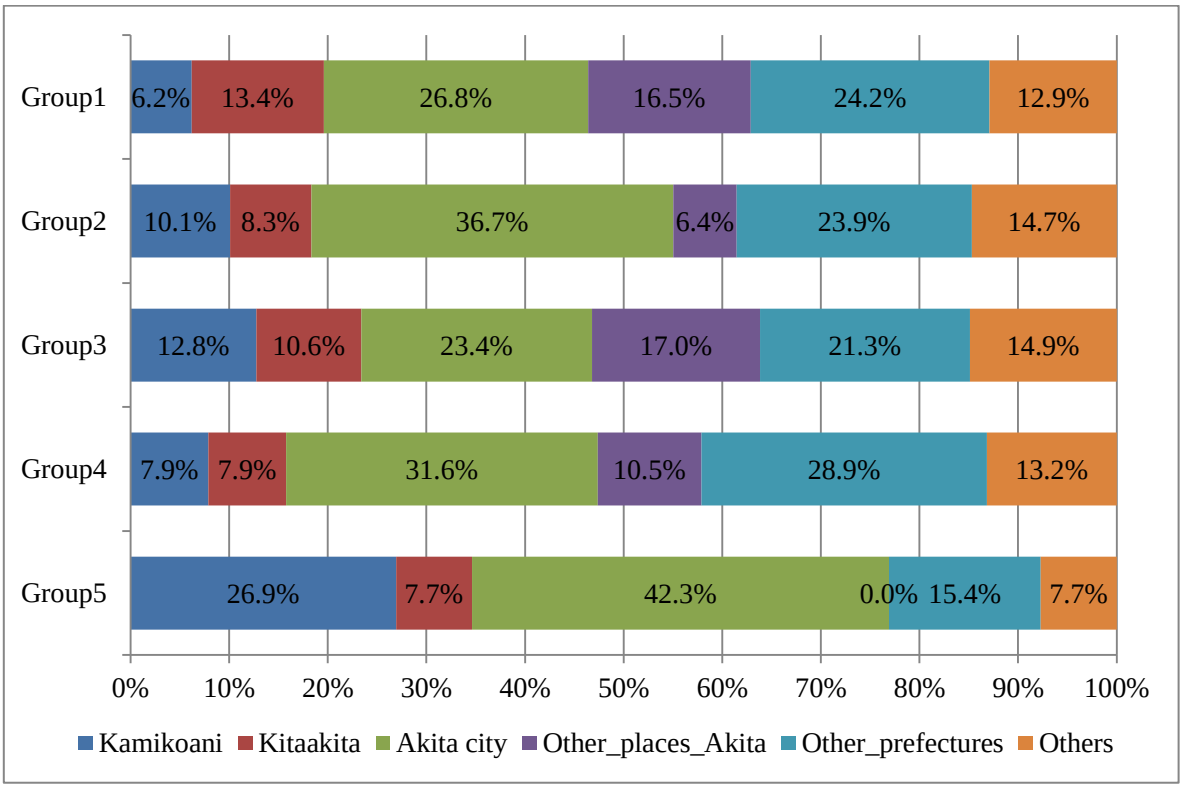

Figure 39 Residence of out-migrated family members of household (n = 341)

4.3.6. Self-evaluation of the current living conditions

The last section of questionnaire survey was designed for the self-evaluation on the current living conditions with Likert scale method. A total of 18 statements were prepared based on seven main categories. These seven categories were deducted to 18 subcategories before being formed into the statements (Table 7). Households were asked to give a score that describes the resident's evaluation on the 18 statements shown in Table 7. Each score represents the following interpretations: 1= "Strongly agree", 2 = "Agree", 3 = "Neither agree nor disagree", 4 = "Disagree", 5 = "Strongly disagree" to the 18 statements.

Table 7 Provided 18 statements for self-evaluation in the questionnaire

	Main categories	Subcategories	Statements
1	General environment	Nature	Community is in a good natural environment
2		Living environment	Community keeps good living environment
3		Water facilities	Water supply and sewerage systems are sufficiently equipped
4		Road condition	Basic infrastructures, such as road condition, are in a sufficient condition
5	Transportation & Access	Transportation	Access to major transportation means are sufficiently secured
6		Access to groceries	Access to groceries and other basic items are sufficiently secured
7	Employment & Education	Commute	It is convenient to commute to work place(s) from where I live
8		Employment opportunities	There are enough employment opportunities
9		Educational environment	Access to education for children is sufficiently secured
10	Health & Care	Medical services	Medical services are sufficiently provided in this area
11		Care services	Access to care services and related care facilities are sufficiently provided in this area
12	Community life	Community cohesion	There is a good sense of membership and a sense of belonging among residents in my community
13		Neighborhood relationships	Members of the community are generally kind
14		Community activities	It is generally enjoyable to join local events and activities in my community
15		Socializing with others	Sometime I feel a bit of stress as I need to pay a good care for others because of the close relationship with others in my community
16	Human resources & Local traditions	Successors	There are enough young residents who will succeed household and community matters
17		Traditions	Traditional festivals and rituals are active and well maintained
18	Others	No particular things to worry	There are not any particular things I am worried in the current living conditions

Figure 40 shows the mean scores of the self-evaluation for 18 statements among the five community groups. The circle shown in the center of the figure represents the area where the residents gave positive evaluations which are below the score 3.0. Those scores that exceed this central circle show negative evaluations by the resident which are above the score 3.0. In other words, those scores appearing outside of this circle are the factors that residents are feeling a certain degree of dissatisfaction or anxiety in their current living conditions.

In the results, negative evaluations were given by all community groups on "Transportation", "Commute", "Access to groceries", "Medical services", "Care services", "Employment opportunities", "Community activities" and "Successors". Among them, residents expressed particularly strong negative evaluations in "Access to groceries", "Employment opportunities", and "Successors" at the score of 4.0 and higher; these three factors can be seen as the major concerns of households regardless of the types of community groups. The rest of the negative evaluations appeared in various dimensions of the living conditions; however, "commute", "medical services", and "care services" are also linked to the access issue of households.

In contrast, positive evaluations were given to "Nature", "Living environment", "Water facilities", "Community cohesion", "Neighborly ties", "Socializing with others" by all five community groups. While "Water facilities" and "Nature" are related to the general living environment of households, the rest of the factors are related to social relationships in their communities. "Road" was also evaluated positively by the residents of Group 1 to 4; however, it appeared in a slightly negative evaluation in Group 5.

Furthermore, it is important to note that the scores of all five community groups appeared in similar shapes. This point suggests that the residents of Kamikoani share similar degree of both positive and negative evaluations on the selected 18 statements on their living conditions. In other words, the shapes of self-evaluation appearing in Figure 40 are illustrating the general satisfaction and concerns of the villagers on the current living conditions in Kamikoani.

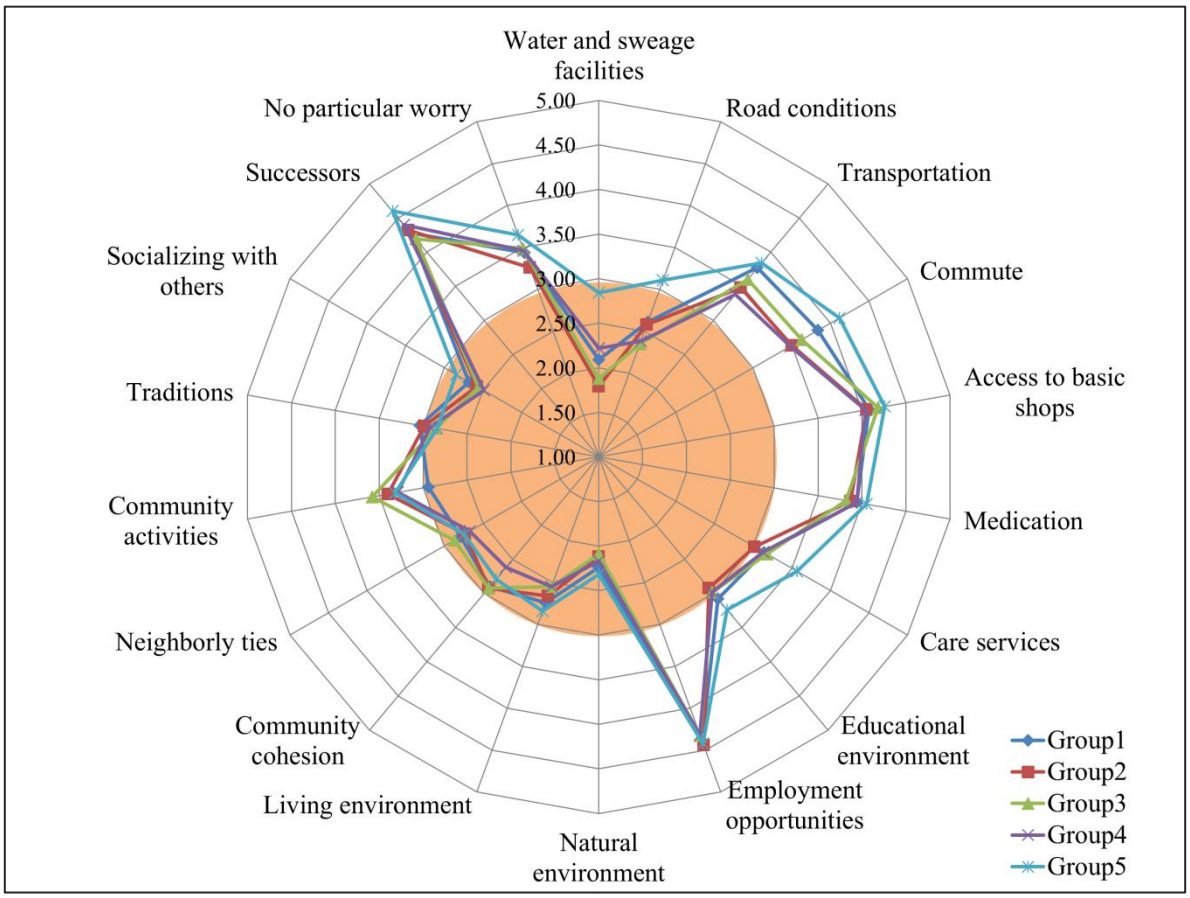

Figure 40 Self-evaluation of the current living condition in the five community groups

4.3.7. Downsize and disappearance of local activities and events

The results from questionnaire survey illustrated the state of each community groups from the perspective of individual households. Aside from the results, the collective actions of residents particularly about the local festivals were investigated by semi-structured interviews. The state of local festivals are emphasized here because the findings from semi-structured interviews suggest that those residents' groups formed for local rituals and festivals have been downsized or have disappeared, while at the same time, other basic maintenance works of living environment such as seasonal cleanups, mowing grass, and cleaning public paths are conducted almost at the same degree among all the five

community groups. In other words, the state of local festivals is more a reflection of the present quality of community function in each community group.

Regarding local festivals, the issue about the role of children was raised by many of the local leaders. Since children are the main actors in many festivals, decline of youth population has been quite an influential factor to reorganize the local festivals. Such impacts are found in the comments of leaders about Harumatsuri (spring festival) and Matobi[6] festivals.

"Local festivals were organized mostly by children in primary and junior-high schools. Now we do not have any children at these age groups, so we have discussed if we should stop doing our local festivals or not. In our community gathering, we agreed that we should continue even if they are largely conducted by adults because once we stop, it would be difficult to restart them. We want to keep our tradition going even though its size has become smaller. For example, at the occasion of Harumatsuri (spring festival) we had two Mikoshi (portable shrines) in the past, one for adults and the other for children. We had to stop having one Mikoshi for children since there were no more children in primary school age in our community, and then later we also stopped doing the other for adults. As we stopped carrying Mikoshi, less number of community residents came out to join the festival. Today, we are holding a small gathering at our community shrine to pray with a Shinto priest for the year's good farming." (Leader of Oobayashi community, Group 2)"

"It used to be the role of junior-high and high school students to prepare for Matobi festival in our community. Since we do not have any children at this age groups as well as young residents today in our community, we discussed if we should stop doing Matobi festival or not. This discussion was in my first year as community leader and we concluded that we continue but with smaller scales. We used to do multiple letters, like 3 or 4 words, but we decided to keep it to one word. Although there are not many children and young members in our community today, we hope to keep this festival as long as we could organize it." (Leader of Oobayashi community)

[6] In Kamikoani, there is a local festival called Matobi which is held on March 21st every year. In this festival, residents make large fire letters by wood and fabric materials in each community. In 2010, 16 communities out of 20 joined this festival and made their own letters in each community. The present state of this Matobi festival in interviewed four communities described different state of communities in terms of its preparation as well as the size of fire letter they set for the festival.

Among the four communities we interviewed, Oobayashi, Shimobussha, and Nagashinda communities are participating in Matobi festival; however it was stopped several years ago in Minamizawa community. In the three communities which are maintaining this festival, they are experiencing gradual changes in its scale as well as the members who are in charge of preparation. Such changes can be found in the following comments by the local leaders.

"We used to make some difficult letters in our Matobi festival beside the letters of "Chunichi" that is the main letters that every community which joins Matobi festival makes. The letters we made were popular because we could make the details of each letter clearly. However, since the number of participants declined, we have decreased the number of letters we make for this festival." (Leader of Shimobussha community)

"In the past, the preparation for Matobi festival was the role of children. We made a small shed by dry straw and all children from our community prepared for the festival about two months before the date of Matobi. Today, we (adults) all do this preparation together since the number of children declined." (Leader of Nagashinda community)

"We used to do Matobi in our community as well but we stopped doing it several years ago. Our community is right next to Koani river, so that we set our letters on a slope of mountain on the other side of this river. In this way, we could see the letters clearly since they were situated in a higher position than the residence area of our community. Later, we changed the location to set those letters on the side of our residence area and also a lower position since it was a hard work to bring all prepared materials to the other side of Koani river and also to a higher position in the slope of mountain. We shifted the location also because of the cost. Then, at the time I became a committee member of our community's association, there was a discussion about whether we should continue Matobi or not. This was already a while ago and we did not have any children being involved in Matobi. I told the other members we should maintain it as long as we could even if we downsize the scale and degrade the quality of letters. However, the majority of the committee members expressed their concerns. At the end we decided to stop Matobi in our community. Today, as I see the Matobi of other communities, I feel that we should have maintained it even if our letters would not be as good as others." (Leader of Minamizawa community, Group 5)

There are other informal religious groups called Koushinkou and Karamatsukou[7] which are both practiced widely at each community in the village. Normally, there are multiple groups of residents for Koushinkou and Karamatsukou; however due to the depopulation and also aging of residents, some communities have downsized these folk religious groups. Some of the comments of local leaders describe the changing quality of these informal groups of residents and different degree of management between Group 3 and 4. For the case of Group 5 community, Minamizawa community, both Koushinkou and Karamatsukou are not practiced today.

"We used to have three groups for Koushinkou in our community, but now we reduced the number to one. We also have a group for Karamatsukou. They are having their gatherings at our community center, not in one of the member's house now. For the case of Koushinkou we are still having our rituals at one of the member's house. The role of hosting the group circulates, so it is not the task for one household. In the past, the host house prepared all dishes at home but now we collect money and order food from a local restaurant. This is because the preparation of food started to be burdensome for some households. Though it has been simplified, we are still keeping our tradition." (Leader of Shimobussha, Group 3)

"We had Koushinkou groups until about two years ago, in our community. There were about 3~4 groups and at the occasion of Koushinkou, we gathered at one of the members' house and prayed for Koushin-sama. After the ritual, we had food and alcohol together. However, as the members get aged, the preparation for Koushinkou at the household who is in charge of accommodating other members started to be a burden. So we decided to dismiss these groups. In the past, the foods prepared for Koushinkou was all home-cooked by the household. However it has been switched to ordered food in the last few years. Each member also paid about 3,000 yen for the cost of food and drinks. We have hanging scrolls of Koushin-sama that we used in this event and we used to take turns to keep them in each household of group members. However, as we dismissed our groups, we enshrined these

[7] Koushinkou and Karamatsukou are commonly practiced rituals in Kamikoani. They are both Japanese folk religious rituals organized about every two months. Koushinkou is for male and Karamatsukou is for female residents. Those ritual groups for Koushinkou and Karamatsukou are organized by groups and these groups exist in each community, often multiple groups. On the day of Koushinkou (or Karamatsukou), members gather at one of the member's house and read scripts which are written on the hanging scroll of Koushin-sama (God of Koushin) with other members for a set number of times. The same practice is done in Karamatsukou groups with the hanging scroll of Karamatsu-sama (God of Karamatsu). After this ritual, the members of Koushinkou (or Karamatsukou) have food and alcohol together at the venue. Therefore these groups nurture good social relationships within each community.

scrolls in our community shrine (in order to avoid putting the responsibility of keeping them in one member household).” (Leader of Nagashinda community, Group 4)

Finally, Harumatsuri (spring festival) and Akimatsuri (fall festival) in Minamizawa community today suggest possible changes in the meaning of holding local festivals. Similar to the case of other communities regarding the decline in the number of child participants, due to the decline of farmers in Minamizawa, the meaning of these festivals has changed. Such situation can be captured in the following comment:

“*We have Harumatsuri (spring festival praying for good farming of the year) in our community. It used to be larger but as the number of participants declined, it became a formality activity. We clean our community shrine and call a Shinto priest for prayers, then we have a small gathering. However, we stopped doing Akimatsuri (fall festival to thank for the harvest of the year) many years ago since there were no more farming households in our community. We are simply losing the meaning of holding such festivals in our community.” (Leader of Minamizawa community, Group 5)*

4.3.8. Summary of findings from the fieldwork in Kamikoani

This fieldwork applied the framework of community marginalization that hypothesizes that the set five community groups based on their population sizes can capture the different moments of community marginalization with their current quality of community function. The findings from the household-based questionnaire survey suggest different state in living conditions between Group 1~4 and Group 5 in the following three points. First, many of the daily activities of households, such as transportation, access to daily items, and farm operations in Group 5 are found at less frequency and smaller scales compared to Group 1~4. At the same time, the households of Group 5 are more dependent on the services provided by those who live outside of the communities. They often receive some support from their relatives and out-migrated family members. This support from outside has appeared clearly on those findings about transportation means and access to basic services and property management of households. These are fundamental activities to maintain the living conditions of households. Second, in the result of social relationships, there are a higher proportion of households in Group 5 who do not consult with anyone

when they encounter some concerns or troubles at their households. This result implies that the impact of community marginalization appears not only in physical conditions but also in social aspects of households. Partly this could be seen as a consequence of downsize or disappearance of local activities in each community since it indicates less opportunities to have interactions with other community members. Third, regarding the economic state of households, the proportion of households who are not satisfied with their current income levels is higher in Group 5 than other community groups. This may be linked to the fact that the proportion of older residents is higher in Group 5, thus there are more pensioner households; who tend to have lower income than working households and also spend more for medical services. These three points that illustrate differences between Group 1~4 and Group 5 can be seen as the actual changes that residents experience in the process of community marginalization. They can also be considered as a set of benchmark changes to capture the marginalization of a rural community.

While the state of Group 5 is well captured by the questionnaire survey, some of the qualitative differences were observed in Group 4 communities from the semi-structured interviews. Such qualitative functional declines were particularly found in the downsizing trend of local activities and residents' groups for local events. In the case of Minamizawa community in Group 5, most of the large parts of local festivals were already stopped and the local groups for them have also disappeared, while for the case of Nagashinda community in Group 4, residents are still maintaining local activities with downsized scales and quality. This point suggests that more qualitative changes happen as a prior state of the tangible changes in the community marginalization process once the size of communities becomes smaller. With knowing some evidence of community marginalization is present in Group 5, it can be assumed that the population size has a significant impact to the degree of community function. Hence, the size of Group 4, which is 40~59 residents, could be seen as the turning point to further marginalization.

The framework of community marginalization suggests that the decline of community function level would be less in degree between the 1st stage and 2nd stage of the

process as compared to the degree in 2nd stage and 3rd stage, Therefore it would be difficult to observe the declines of community function during this period. It may be the case that those changes regarding community marginalization occur only in a specific dimension of the local activities such as local festivals or community gatherings, not in tangible changes such as abandonment of farmlands or individual properties.

In contrast to these points about the difference among community groups, the results of self-evaluations of current living conditions did not illustrate clear differences among the five community groups (Figure 40); however those factors that appeared with negative evaluations are overlapping with previously discussed points. “Transport”, “Commute”, and “Access to groceries” are directly related to transportation and access issue. “Employment opportunities” and “Successors” are related to economic state and property management issues in each community. Generally speaking, those concerns expressed by residents in the self-evaluation are quite similar regardless of the difference of community groups and this point indicates that the villagers share quite similar degree of satisfaction and anxiety on the same factors in Kamikoani.

4.4. Placing the five community groups within the framework of community marginalization

As many of the findings from the questionnaire survey illustrate, the current state of Group 5 is considered to be in a later stage than Group 1~4 within the framework of community marginalization. However at the same time, there are still some degrees of collective actions being maintained in Group 5 communities, therefore the current condition of Group 5 can be situated right at the end of the 2nd stage of the marginalization process. It is also the case with Group 5 that the amount of collective actions is quite minimum, and the current living conditions of the households are much supported by the services provided from the outside of communities, therefore, Group 5 communities are about to pass the 2nd turning point in the process (Figure 41). Based on the fact that the support from outside is already required, its dependency on this support would increase by entering to the 3rd stage of the community marginalization. Once the community function disappears, the living

conditions of each household would become on their own since there will be no collective actions among the residents to sustain the local living conditions. Hence, those households who do not have the source of stable support from the outside of community would have to face severe challenges of sustaining their living in a marginalized community. This point brings us to a discussion of how to maintain a set of key functions for quality living in those rural communities which are in the later stages of the community marginalization.

It was also suggested that the state of Group 4 can be seen as the turning point to further community marginalization. It is situated in the middle of the 2nd stage (Figure 41). As the framework shows, the degree of community function at this point is still maintained at a slightly lower level than the 1st stage. The decline of community function is difficult to observe with tangible measures at this stage, yet those qualitative differences between Group 1~3 and 4 were captured in the results of the semi-structured interviews. As the framework suggests, the degree of community function would start to decline drastically as a community reaches the turning point between the 2nd and the 3rd stage. From the perspective of the local residents, such transition would be observed as a series of downsizing and disappearance of local events and daily activities at their communities and they would take place in a short period of time.

The differences among Group 1~3 were not well captured by this study; instead, their similarities were well identified. The results showed the residents' concerns on the shortage of manpower in managing properties and local events rather than the other factors that may affect the quality of resident's daily lives such as transportation and access related topics of households. Therefore, these community groups are still assumed to be at the 1st turning point (Figure 41). With the case of Kamikoani, these groups of communities are identified in the greater size of 60 residents and above. This 1st turning point can be seen as a starting point of gradual declines. At this stage, those changes in residents' daily lives would not be evident but it would cause a slow decline in community vitality. After this point, it is assumed that residents of these community groups start to notice a gradual

decline of community function in a relatively long term compared to the case of Group 4 communities.

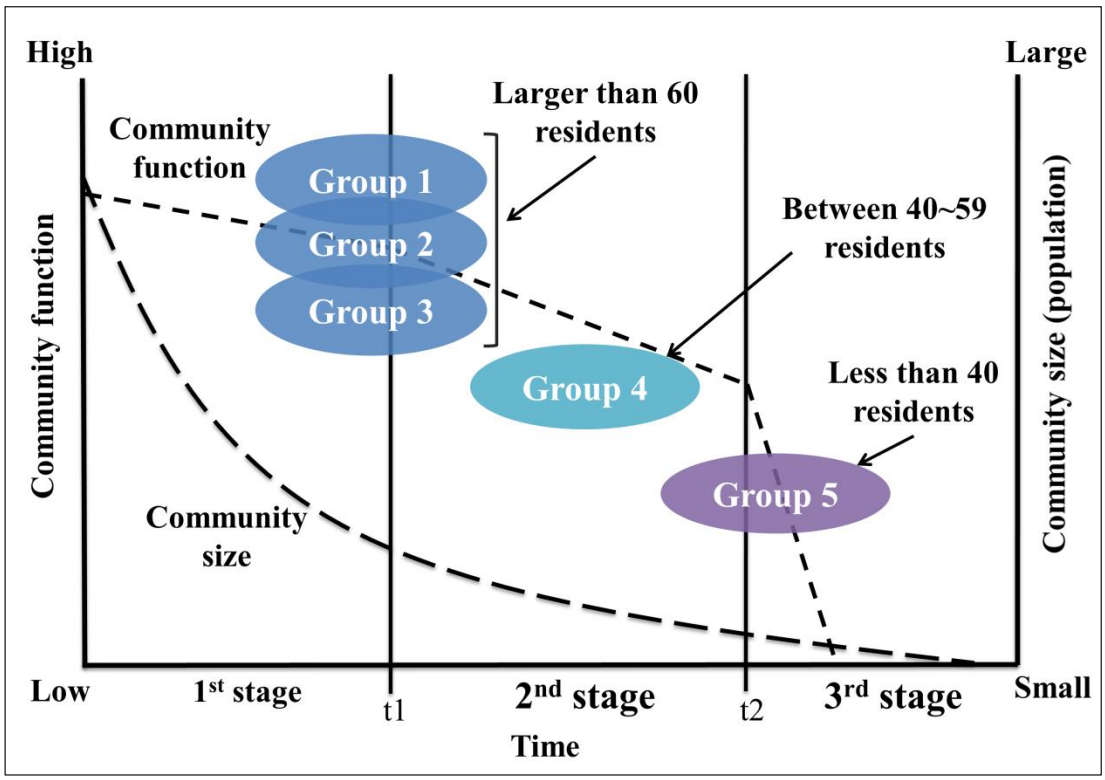

Figure 41 Current positions of the five community groups in Kamikoani within the framework of community marginalization

4.5. Summary

This chapter presented the first fieldwork of this research which was conducted in Kamikoani village in Akita, Japan. This fieldwork aimed at investigating the process of community marginalization through examining the living conditions of residents among five community groups which are set based on the size of their population. The results suggest different quality of community function in three possible positions within the proposed framework of community marginalization. These three positions of community groups are referred with concrete population sizes, hence these population figures can be utilized as benchmarks to assume different state of community marginalization. While the

state of each community group is well captured by this fieldwork, it is important to note that the types of local activities that form community function would vary based on local contexts. Therefore, those suggested population sizes for different stages of community marginalization are only applicable to the case of Kamikoani. More specifically, these suggested sizes of population in each community group drawn from this fieldwork should not be considered as general benchmarks to examine the process of community marginalization. For such generalization of the findings regarding community marginalization, at first, further empirical studies are required to identify common factors among the cases. Then, the discussions on possible benchmark figures of communities for describing different states of the marginalization process may become feasible. Findings from this fieldwork in Kamikoani will be discussed further in the concluding discussion of this dissertation in Chapter 6.

5. FIELDWORK IN THE UK: COMMUNITY-BASED PROJECTS

The aim of this chapter is to present the findings of the second fieldwork of this dissertation which was conducted on community-based projects in rural areas of the United Kingdom (hereafter the UK). This fieldwork is designed to respond to the second sub-objective of this dissertation, that is, to discuss possible future pathways for rural areas in the era of aging societies. The first fieldwork of this dissertation examined the marginalization process of rural communities. By doing so, on the one hand, this dissertation elucidates the possible declining process of residential communities due to the aging and depopulation of rural societies. However, on the other hand, it would be critical to examine the other cases, which are taking concrete reactions to their local challenges, in order to discuss the possible future for the sustainability of rural areas. In order to achieve this objective, this chapter analyzes those established community-based projects in rural areas of the UK. In other words, this second fieldwork is to bring a reference point to the discussion about the possible future pathways for rural areas. A total of seven community projects were investigated in this fieldwork; these cases include six community projects and one national supporting organization. The six community projects are examined collectively to capture the following three points; i) the types of local challenges that the studied community projects have addressed, ii) the key attributes which are commonly found across community projects, and iii) the current challenges in the project operation and their future prospects. Since the collected information from the national supporting organization is to examine the overall trend of community-based project in the country, it is used to add detailed explanations to each finding from the other six community projects.

The case of the UK is selected for the following two reasons. The first is about the similar experiences of rural declines between Japan and the UK. Although the figures in population statistics indicate a greater degree of aging society in Japan, the experience of rural areas is similar in such topics as the out-migration of young population, closures of local services, and general decline of social vitality at the rural community scale. The second reason is about their advanced experience in addressing the local challenges in rural

areas by emphasizing the initiatives of local residents at the community scale. There is a national organization called the Plunkett Foundation which provides a series of structured support to residents' groups to establish viable community projects such as community hubs, communal asset management, and local food initiatives. These community projects are formed as co-operatives or social businesses to address the issues that the local residents are concerned about. These bottom-up approaches are also taken in other countries; however such experience and documentation by the supporting organization and the network of such community initiatives are well developed in the UK. Therefore, these cases in the UK are considered as appropriate cases to examine the key characteristics and challenges in responding to general rural declines.

5.1. Description of Fieldwork Site: the United Kingdom

5.1.1. Population aging in the UK

As it was well described in Chapter 2, population aging has widely spread in Europe. The UK is not an exception and is currently experiencing a profound aging of it society. The total population of the country is approximately 63.3 million and the share of age 65+ population is currently at 16.6 per cent. Demographic predictions show that the proportion of older population will increase to 20.0 per cent by 2025, and to 24.7 per cent by 2050. Figure 37 illustrates the long-term changes of age 65+ population in the country since 1950. The proportion of age 65+ population was below 10.0 per cent in 1950s and it remained lower than 15.0 per cent until 1980s. In 1990, the figure went up to 15.7 per cent, yet it has been around 15~16 per cent up to the present. Although the proportion of older population in the UK has been lower than other European countries with population aging such as Germany, Italy, and Spain, the UK society is going to experience an aging of its population in coming decades. According to the projections, it is going to reach 20.0 per cent by 2025, and will further increase to 24.7 per cent by 2050 (Figure 42). These figures suggest that one in every four UK residents will be aged 65 years and over in the 2040s (Cracknell, 2010). In addition, following the same pattern of other developed countries, older population is a growing group in its demography. The oldest-old population (age 80 and

over) will be the fastest growing population in the country. Currently, there are 3 million oldest-old population in the UK and this group is projected to double by 2030, and further grows to 8 million people by 2050.

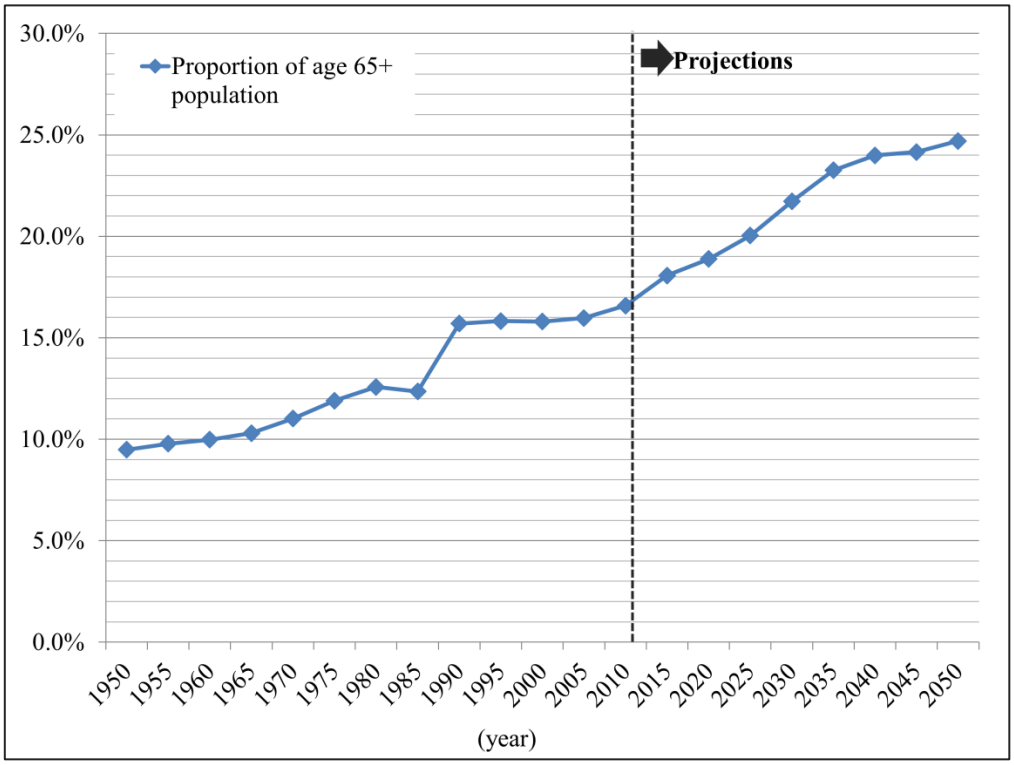

Figure 42 Proportion of age 65 and above population in the UK (Source: created from the database of Office for National Statistics, 2014)

The figure of median age of the UK also proves a long-term trend of population aging in the country. The median age was 35.4 years old in 1985 and has steadily increased to 39.7 years by 2010 (Figure 43). According to the predictions, it will remain just below 40.0 years until 2020, yet it is expected to be 42.2 years by 2035. In terms of the difference among the four constituent countries of the UK, Wales and Scotland have relatively higher median ages at above 41.0 years in 2010 (Table 8). These two countries will remain as aged regions within the UK compared to England and Northern Ireland. As of 2010, the youngest population composition was found in Northern Ireland which has both the lowest

median age (36.9 years old) and the smallest share of age 65+ population group (15.0 per cent). In the coming decades, however, this trend is projected to change as England will have the least aged population composition among all the four constituent countries at 41.9 years old by 2035. This is largely due to the migration of young population to large cities such as London, Birmingham and Manchester. In contrast, Scotland is expecting the highest median age by 2035, which is 44.2 years old.

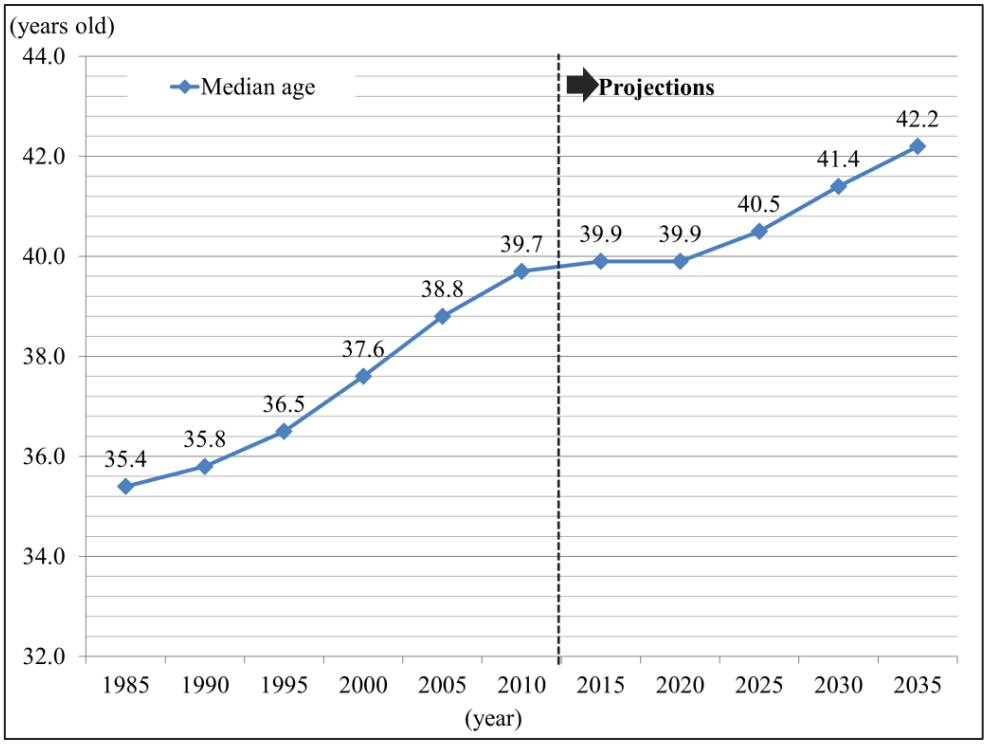

Figure 43 Median age of the UK (Source: created from the database of Office for National Statistics, 2014)

Table 8 Median age in four constituent countries of the UK

	2010	2015	2020	2025	2030	2035
England	39.5	39.7	39.7	40.2	41.1	41.9
Wales	41.5	42.1	41.7	41.9	42.7	43.7
Scotland	41.0	41.6	41.7	42.3	43.3	44.2
Northern Ireland	36.9	37.6	38.7	40.1	41.6	42.8

(Source: Office for National Statistics, UK)

Aging of the UK is also caused by the same set of demographic changes as other developed countries, which are, i) decline in total fertility rate (TFR), and ii) increase in life expectancy. During the 1950s~60s, TFR of the UK was higher than the replacement rate (2.1 births per woman). However, it declined to 2.01 by 1970 and it went down further to 1.73 births per woman by 1975. The figure remained at around 1.7~1.8 level during 1980s~90s. By 2000, the figure declined further to 1.66 births per woman; however it has been increasing since 2001. By 2010, the figure has recovered to 1.89 births per woman, yet it is still below the replacement rate. Although TFR of the UK is not as lower as those of Asian countries with rapid population aging such as Japan, Korea and Singapore, the UK society needs to prepare for a gradual decline of population as well as an increasing ratio of older population groups.

Regarding the life expectancy of the UK society, it has increased by approximately 8 years both for male and female since the 1950s. As it is universally observed in developed countries, female life expectancy is all the time longer than that of male. In the UK, life expectancy for male in 1981 was 70.9 years while that for female was 76.9 years which is 6.0 years longer in female. Projected figures indicate additional 6~7 year increases for both for male and female by 2050.

On top of the previous two main causes of population aging, there is a third demographic factor that contributes to aging of UK society, which is aging of baby-boom generations (COWI, 2008). Among the developed countries, baby-boom generation who was born after the Second World War to around 1965 is commonly identified as the cohort

that has created a significant impact to the entire demographic status. In the case of the UK, aging of baby boomers will inevitably push the UK society into further aging. Baby boomers in the UK are a group of population who were born between 1947 and 1964 and the size of this population group is approximately 17 million people. Those who were born just after the Second World War has already entered to older population group while the remaining baby boomers born in the 1960s are currently in their mid-50s. The younger cohorts of baby boomers will consistently be entering to the older population in coming decades. Aging of baby boomers can be seen as a trigger of large scale social changes in the near future of the UK.

With such predictions of growing older population in the UK, there is a much debate on the public spending for social support to the older residents. In 2008, 65 per cent of Department for Work and Pensions benefit expenditure was spent on older population which corresponds to one-seventh of public expenditure (approximately £100 billion) in 2010-2011 fiscal year (Cracknell, 2010). If the UK government continues to provide the current public support to its older population such as state benefits and pensions, its annual spending is projected to increase by £10 billion in every one million increase of older population. The financial pressure on National Health Service (NHS) would also be a critical issue in the financial sustainability of the country as the number of older population is expected to increase continuously. In general, the spending for retired households is higher than non-retired households. In 2007-2008 fiscal period, the average value of NHS for retired households was £5,200 while that of non-retired households remained at £2,800. Additionally, the total spending on medical services varies among the different group of older population. The cost of hospital and community health services for oldest-old population (age 85 years and above) is around three times higher than that for age 65-74 years population group.

5.1.2. Influence of internal migration

Besides those described demographic changes and the financial impact of having higher proportion of older population, it is important to examine social factors that

contribute to the aging of societies. One of such social factors is internal migration trend. Regardless the differences between developed and developing countries, migration of youth or also known as 'exodus of young adults' to urban cities in seeking for better opportunities is widely observed (Amcoff & Westholm, 2007; Champion & Shepherd, 2006; Goll, 2010; Stockdale, 2006a). For rural communities, young population is vital resource not only of the reproduction cycle of local population but also for sustaining production activities and social vitality (Muilu & Rusanen, 2003; Niedomysl & Amcoff, 2011). In the case of Japan, a large scale outward migration of young population from rural areas occurred during its rapid economic growth in late 1950s to early 1970s. The migrated population has continuously resided in urban areas and has not returned to rural areas. This situation is partially the cause of rural decline and community marginalization in rural areas of Japan. In contrast, in the UK, the US, and some other European counties (e.g. Norway, Denmark), there was a new trend of deconcentration of population or also known as 'counterurbanization' which describes the shift of population from metropolitan areas to the countryside. Commonly, internal migration is from rural to urban areas, yet counterurbanization implies a population flow in the other direction. This phenomenon was first observed in the 1970s in the US, the UK and other European countries (Beale, 1975; Champion, 1989; Mitchell, 2004). Such variations of internal migration have been a subject of migration studies in relation to rural areas (Amcoff, 2006; Bijker & Haartsen, 2011; Dahms, 1995; Jauhiainen, 2009; Klinthäll, 2006). Moreover, some international migrations to non-metropolitan areas of developed countries have also grown to being a significant contributor for rural demography in Europe (Hugo & Moren-Alegret, 2008). With all types of migration to rural areas, those migrants are commonly in their early retirement and switching to self-employment or less demanding and fewer working hours jobs. Since these migrants often have rich working experience and established networks in cities, they are seen as a great potential resource for the revitalization of rural economy and community activities. More specifically, their individual endowments are imperative for creating new links with external support and markets, and many of them practice leaderships and entrepreneurship in their rural communities (Kalantaridis, 2010).

In contrast, despite the fact that there is an increasing interest for potential return migration of the baby boomers in Europe, some other studies suggest that such return migration may not be occurring naturally. Jauhiainen (2009), for example, conducted a large scale social survey to a group of baby boomers who were born between 1946 and 1955 in Finland. The result of survey showed that merely 3 per cent of the total respondents expressed their willingness to return to their hometowns after retirement, another 19 per cent of the respondents showed their interests in living in their home communities as part-time base (Jauhiainen, 2009). As the trend of exodus of youth adults would remain, it would be critical for rural areas to attract such resourceful persons who are in their early retirement ages and also hold interests for the lifestyle in rural areas.

5.1.3. Aging in the countryside

Within the total population of the UK, about one-fifth of them are residents of rural areas (DEFRA, 2012). Similar to the case of Japan, aging of regional societies are happening in a great degree of variations; population aging is more recognized in rural areas. Today in rural England, 40 per cent of the population is older than 50 years old and 25 per cent of them are over 65 years old. The share of these two older age population groups is in a long-term trend of increase; such aging trend in rural area of the country is named as ‘greying countryside’ (Lowe & Speakman, 2006). Figure 44 shows the internal migration patterns in England between 2007 and 2008. Maps 1~4 show migration trend of each population group divided by their age groups. Map 1 shows general migration of young population (age 16-24 years) into major cities for job and education opportunities. Map 2 and 3 shows migration patterns of middle (age 25-44 years) and late (age45-64) age groups. These maps show rather unique characteristics of internal migrations in the UK. As people move onto the later parts of their life course, they tend to move out from the central areas of cities. Middle age migrants (age 25-44 years) tend to move to outer regions for their lifestyle yet not too far for commuting to their working places. Late age migrants (age 45-64 years) often move into the areas called “deep rural” areas since they are both in early retirement from previous work or are starting to be self-employed in rural areas.

Based on these migration patterns, such regions as Cornwall, Devon, Somerset and Corset in South West England, Norfolk and Suffolk in East of England, Eastern tip of Kent in South East England, west parts of Shropshire and Herefordshire in West Midlands, south part of Cumbria and north part of Lancashire in North West England and eastern coastal areas of North Yorkshire and East Riding of Yorkshire in Yorkshire and the Humber are popular destinations for rural migration of late age migrants (Map 3 in Figure 44). Owing to this rural migration of middle and late age migrants, the overall trend of internal migration in the UK cities is negative and there is a greater number in rural migration which brings positive population growth in rural areas. Such situation has caused increasing price of land and housing in popular countryside for rural migrations.

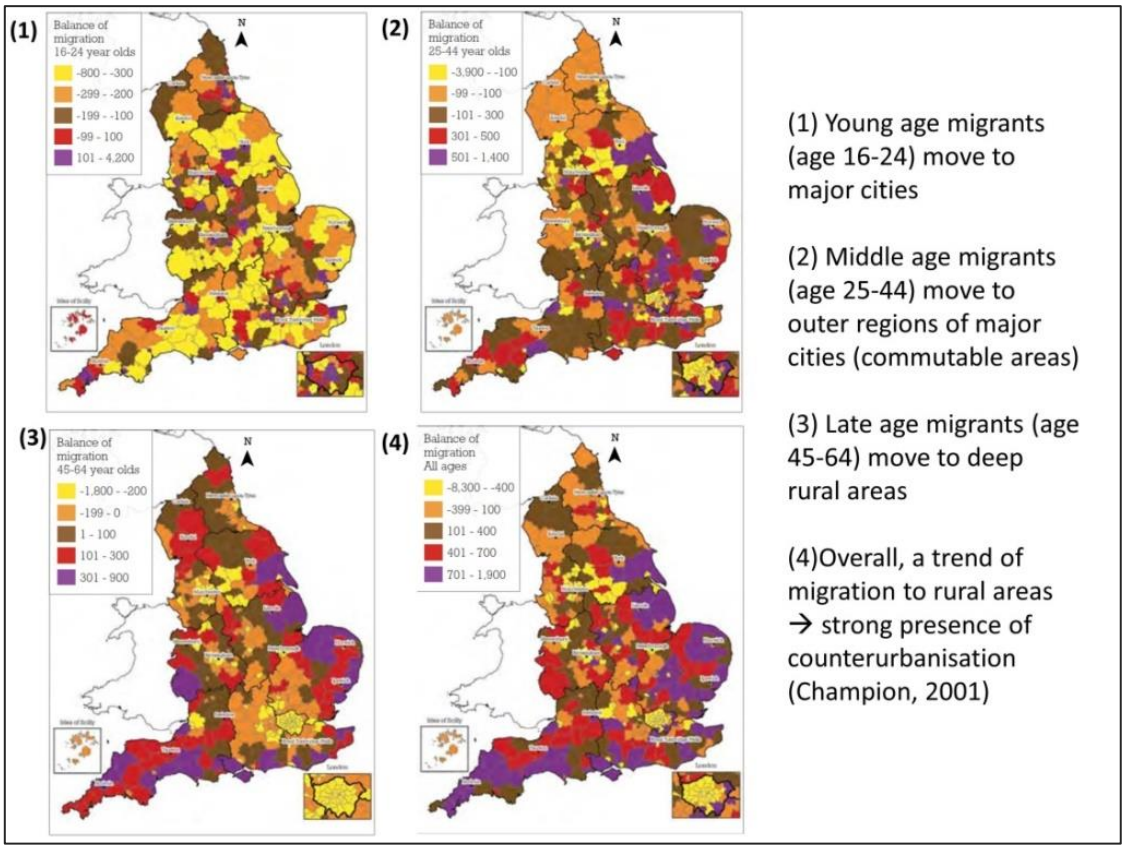

Figure 44: Internal migration trend in England between 2007-2008 (Source: created from DEFRA 2012

5.1.4. Discussed challenges of rural areas in the UK

As we reviewed, rural areas of the UK are entering in a long-term trend of aging societies and have started to face a series of social changes at the local scales. There are various forms of topics that have been discussed in previous literature and many of them are linked to the living conditions of rural dwellers. First, transportation and access related issue is one of the most frequently discussed topics. Access to a stable transportation and basic services are considered as a crucial component for a better condition of social inclusion in rural environment (Farrington & Farrington, 2005; Preston & Rajé, 2007). In the case of the UK, more than 96 per cent of urban settlements have an access to public transportation within 13 minutes of walking distance in hourly or better frequencies of provision. In contrast, only 50 per cent of the rural settlements are covered by public transportation (CRC, 2010). Assuming this lower coverage of public transportation is due to disperse locations of rural communities and longer travel distance to each destination, the major transportation mean for rural settlement would be cars driven by individuals and having such independence in mobility is crucial for the well-being of residents (Gray et al., 2001; Jones, 2009; Osti, 2010). In fact, rural residents travel 40 per cent longer distance than urban residents and because of this, residents in "deep rural" areas with lowest income level spend an average of £50 for gas per week as compared to £32 of residents in rural towns, and £28 of urban residents (CRC, 2010). It was also found that the general living costs in remote areas are up to 20 per cent higher than urban areas. According to the Commission for Rural Communities, a general rural dweller needed to spend £18,600 annually for his or her living cost while an urban dweller needed £14,400 which is about 23 per cent lower. While several studies discussed the minimum and affordable size of transportation system for rural areas (Lovett et al., 2002; Smith et al., 2012), it still remains a critical factor for a rural household whether being capable to drive a car or not in terms of the household's independence in its mobility and accessibility to basic services. This is particularly true as service provisions are gradually declining in the country's rural areas. The coverage of such daily services as banks (including cashpoints), post offices, grocery stores, general clinics (including dentists and pharmacies) and secondary schools are higher

than 98 per cent in urban residence within the distance of 4km while such services are not widely available in rural settlements, and accesses to them require a longer traveling distance (CRC, 2010).

Secondly, the maintenance of community properties is another challenge for rural communities. Closure of schools, small shops and post offices have been discussed in previous literature as a moment for rural communities to lose interactions among residents (Kearns, Lewis, McCreanor, & Witten, 2009; Kovács, 2012; White et al., 1997). Opening of large-scale shopping malls in sub-urban or outer of regional towns have brought a high competition for those small businesses within rural communities and eventually such local service providers are either closed down or withdrawn from rural areas. As a result, those residents who do not have independent transportation, largely older residents, have to face difficulties in traveling to the closest rural town for daily items. Even for those younger residents who have independent transportation, they also have to travel longer distance just for a few items sometimes, which leads to a higher gas cost for households and also more carbon emission..

From the perspective of an entire community, the closure of such local services meant a loss of a "meeting spot" to meet and chat with other people. Those studies on social relationships among the residents in rural areas have been conducted in relation to social capital formation in rural settings. These studies have examined the relationship between the local environment and the residents' identity formation (Burholt & Naylor, 2005; Heenan, 2010), and key drivers to maintain a rural community vibrancy (McManus et al., 2012). These meeting spots have a characteristic of community asset and provide additional social function to increase interactions among the residents. These functions are particularly positive as they create a better social inclusion of older residents in rural setting (Liu & Besser, 2003; Scharf & Keating, 2012).

Lastly, there is much discussion about the positive influence of rural migrants to the rural economy. Those who move into rural areas are largely ex-urban population who have well-established professions and working experience, hence they are often considered as

vital resource or pre-requisite for reviving local economy (P Milbourne, 2012; Stockdale, 2006a). Since these ex-urban migrants have more disposable income than local residents, their spending is also seen as a boost to the declining local economy, yet at the same time, their higher economic status in household budget makes income inequalities in rural areas more visible.

5.1.5. Responding to rural challenges through community-based initiatives

Both political and social interests to the issues in rural communities have been increasing in the UK society. In line with the EU rural policy initiatives for such as the LEADER program by the European Commission (Nardone, Sisto, & Lopolito, 2010; Ray, 2000; Vidal, 2009), rural development of the UK also places an emphasis on the initiates of local residents. Such initiatives of local residents have emerged as community-based projects. These projects are also referred to as community-owned projects (or initiatives) because the entire project is formed by the local residents and also all the operations are managed by the project members. From its initiation to group formation, needs surveys and town meetings, project designs, negotiations with stakeholders, and actual operation of the project are all done by the members of project. Yet, it is not the case that all rural communities have enough capacity to complete such a complex process. Therefore, to support such local initiatives, there are several national institutions that support the bottom-up approach of residents to work towards addressing local challenges in the UK (e.g. Big Lottery, Groundwork, Locality). Among them, there is a national supporting organization specialized in supporting rural initiatives called the Plunkett Foundation (hereafter the Plunkett).

The Plunkett is registered as company limited by guarantee[8] in England and their activities have spread widely in the UK and Ireland. The Plunkett was founded in 1919 by Sir Horace Plunkett who started co-operative enterprises to support rural economy. His

[8] This is a type of company registration in England is used for charities, community projects, and others similar organizations (Website of Company Law Club: http://www.companylawclub.co.uk/topics/companies_limited_by_guarantee.shtml, retrieved 2014.November.22nd).

initiative on co-operatives started from Ireland and quickly spread across the UK. Sir Horace Plunkett had a strong belief that "rural communities didn't have to wait for someone else to make life better for them, they had the potential to do it themselves – with a little help" (the Plunkett Foundation, 2013).

The Plunkett works for the local challenges in rural living conditions, for example, the issues of transportation and its access, withdrawal of public services such as post offices, banks, and libraries, and lack of affordable housing in rural areas today. The main approach of the Plunkett is the introduction of co-operatives at rural communities. Their main support to rural communities is to provide step-by-step guidance to residents' groups to form their local organization. The activity of the Plunkett Foundation is supported by the national government. Currently, the Plunkett is receiving 10 years funding from the government. The office of the Plunkett is in Woodstock, Oxfordshire where the largest number of community-based projects has been established. In the last 5 years, the Plunkett supported around 150 communities annually, and in 2012 the number of consulted communities by the Plunkett jumped to 950. According to the Head of Development and Policy of the Plunkett Foundation, this is largely because the Plunkett has started to be known nationally through its media promotion.

Currently, the major approach of the Plunkett is by community shop project in which residents of a rural community form a formal group to run a community shop business. By 2012, there were 303 community shops established in the UK under the support of the Plunkett. In last 20 years, the number of community shop has increased rapidly (Figure 45). In pre-1993, there were only 22 community shops in all across the country and the number of openings was also less than 10 up to 1997. However, there were 303 shops by 2012 and 46 shops opened in the same year. So far there have been only 3 community shops that have closed down, therefore community shop has been a well-established scheme of community enterprise in the rural UK. Figure 46 shows the geographical location of community shops. As of 2013, more than 55 per cent of community shops are concentrated in South West and South East of England, and less

proportion of shops are found in the northern part of the country. The current distribution of community shops is likely to being caused by the pattern of shop expansion. In the process of community shop opening, the network of community shops is utilized to provide various supports to the residents of new community shop. By sharing experiences and knowledge on the operation, those initiatives in new communities spread well. Therefore, naturally community shops are spreading from the areas with closer distance to the original community shops (the Plunkett Foundation, 2013). Additionally, another possible explanation is the role of migrated members from outside communities. They are often found as a key resource for the revitalization of local economy (Agarwal, Rahman, & Errington, 2009; Stockdale, 2006b) through their rich experience in business in general and network with outside community. As Figure 44 illustrates, South West and South East of England have been major destinations of rural migration for late age migrants. This point explains that these two regions have a greater human resource that the local communities can tap into.

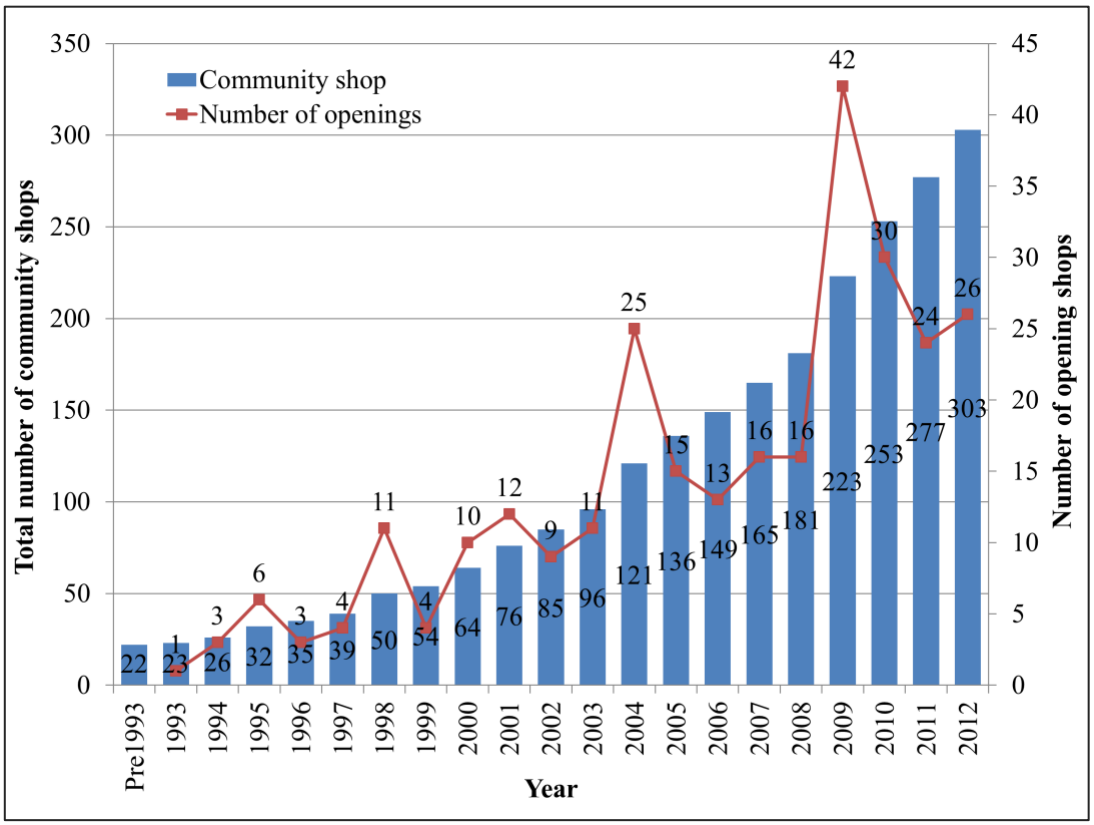

Figure 45 Total number of community shops and openings since pre-1993 to 2012 (Source: created from the Plunkett Foundation, 2013)

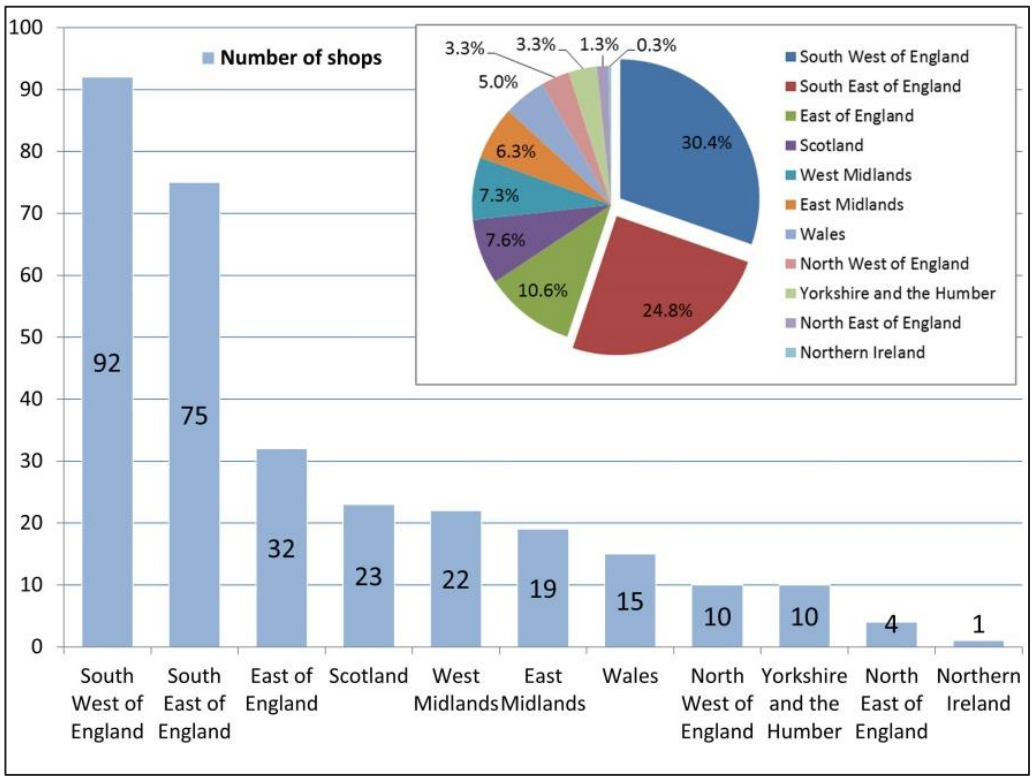

Figure 46 Geographical location of community-shop projects in the UK (Created from the Plunkett Foundation, 2013)

5.2. Fieldwork Design

5.2.1. Methodology for the fieldwork

This second fieldwork was set to examine the following three points about the selected community projects in the UK: i) types of local challenges responded to by community-based projects, ii) common characteristics among the established community projects, and iii) common challenges in their operations. These three points were examined through in-depth interviews to the core members of each community project.

This fieldwork set its target to the community-based projects that are initiated by the local residents, formed project groups by the members of their own communities, and conduct their operations by themselves. In addition, in this fieldwork, community-based

projects also include those community (or social) enterprises whose ownership is being transferred to the local communities and also address the challenges of their local community. This is because the opinions of local residents are also well integrated in their operations in this form of starting community-based projects.

For the purpose of this fieldwork, six community projects and one supporting organization are set as the target for interview survey (Table 9). First, the interview with the Plunkett Foundation was organized in order to gain general information and understand the national trends around community-based projects in the UK.

Second, six community-based projects were selected based on the types and the establishment of projects. Currently, various forms of community projects exist in the UK and some of them are operated as social or community enterprises, therefore the exact number of community projects in the country is unknown. However, in terms of the number of community shop projects, there are 303 shops being operated as of 2012, and there are additional 30 community shops expected to open in 2013 (the Plunkett Foundation, 2013). Since community shop is a widely spread form of community projects, this number can give a good understanding about the current expansion of community-based projects in the UK. Regarding the degree of project establishment, consultations were made with the Plunkett Foundation prior to contacting each project. The cases of Aston Hayes, Fordhall Farm, and Hill Holt Wood were suggested as the advanced community projects in the UK. The other three cases, Ballygally, Eskdalemuir, and Feckenham were added after the individual communication with the core members of each project over emails. These three projects are working on community shops and community halls. These three cases of community projects were added to investigate the most common type of community projects in the country which is about community shop and community hall management.

Table 9 List of organizations for interview surveys

	Name	Since	Location	Local challenges	Project types
1	Ashton Hayes	2005	Ashton Hayes, Cheshire	environmental concerns, closure of community shop and pub	Carbon neutral (energy saving), community shop and pub
2	Ballygally Community Development Association	2008	Ballygally, Country Antrim, Northern Ireland	Closure of community shop	community shop, post office, community center
3	Eskdalemuir Development Group	2005	Langholm, Dumfriesshire, Scotland	Closure of local school, cost for heating	community center, firewood
4	Feckenham Village Shop	2009	Redditch, Worcestershire	Closure of community shop	community shop, café
5	Fordhall Farm	2006	Market Drayton, Shropshire	Possible farm closure	shareholder farm, organic farming, farm shop and restaurant
6	Hill Holt Wood	1995	Norton Disney, Lincolnshire	nature conservation, education and training for youth	woodland management, community hall, education
7	the Plunkett Foundation	1919	Woodstock, Oxfordshire	rural economy, challenges in rural livelihood	supporting organization

5.2.2. Data collection and analysis method

Interviews to those selected community projects were conducted in two separate visits to the UK. The first time was in October 2013 and the second time was in April 2014. To all community projects, in-depth interviews to the leader as well as the core members of the projects were conducted. The interview with the Plunkett Foundation took a form of consultation in order to gain general information about the rural livelihood and community projects in the country. Each interview was conducted at the site of community project, therefore direct observation of the site as well as informal communication with volunteers and visitors were also conducted.

The collected interview data from six community projects were analyzed by qualitative data analysis method. First, all interview data was transcribed into text data. Second, an initial open coding process was conducted. In this initial coding, the key statements that describe those important points for their project operation and also the identified challenges in their projects were coded with simple keywords. These keywords are equivalent to the labels on each part of the transcripts. Third, after several times of open coding on the transcripts, closed coding process was conducted in order to combine similar keywords produced by open coding. By this closed coding process, the labeled sections in the transcripts were summarized into categories. As a forth step of the analysis, open coding and closed coding processes were repeated in order to check the quality of the coding process; this process is also known as constant interplay between open codes and closed codes. Finally, those created categories by closed coding process were further integrated into the main findings. The entire qualitative coding process was conducted on all interview transcripts from the six interviews on community projects. For this process of qualitative data analysis, software called RQDA (R package for Qualitative Data Analysis) R package version 0.2-7 was used. RQDA is a freeware available via RStudio.

5.3. Case descriptions

This section provides the detailed information of the six community projects studied in this fieldwork. Aside from basic information of project site such as the location, population size, and general background of the community, brief descriptions of the projects (including year of establishment, number staff and volunteer members, initial purpose of the project) as well as personal background of project leaders are presented in this section.

5.3.1. Ashton Hayes Going Carbon Neutral

Ashton Hayes (hereafter Ashton) is a small rural village located about 15 km outside of Chester in Chestershire. The total population of Ashton is 936 residents of 392 households (based on National Census 2011). The community project of Ashton started as an initiative to become the country's first carbon neutral community. The project started in

November 2005 when Ashton Hayes Parish Council decided to give support to the community and set up the Ashton Hayes Going Carbon Neutral Project. The local council required the project team to organize a town meeting to explain the idea of Ashton project and also to gain agreement from the local residents. This town meeting was held at Ashton Hayes Primary School on January 2006. For this town meeting, Mr. Charnock, the leader of Ashton project, sets some strategies. The first and foremost important strategy was the involvement of children. In order to have the majority of residents attend this town meeting, he asked the students of this primary school to draw the pictures of future cars. These pictures were exhibited at the town meeting. His second strategy was to make the event fun and tangible. He prepared champaign produced in England. It was very important to bring the English champaign because its quality has improved due to the warmer climate in recent years; by drinking English champaign, the participants could think about the impact of climate change clearly and link the topic to the objective of Ashton project. The third strategy he applied was the use of media. From being a journalist, he knows the positive influence of media coverage. He invited TV broadcasts to join the town meeting. Mr. Charnock and his friends were successful to have 300 residents at the town meeting. At this meeting, after having the exhibitions and talks over English champaign, Mr. Charnock introduced the idea of making Aston as the UK's first carbon neutral community to the residents. He made it clear that the project initiates energy saving by behavioral changes; therefore it does not require the spending of any money. His idea was welcomed by the participants at the meeting.

The actual project started from monthly meetings with about 30 supporting members who signed up for volunteering at the town meeting. This monthly meeting started from February 2006. The University of Chester, a local university in the town of Chester, joined as a volunteer to provide technical support for Ashton Hayes. A group of graduate students and their supervisor conducted the initial energy use survey and five year behavioral change survey at each household since 2006. Ashton project introduced various ways to save energy by behavior changes. As the project developed, people started to talk about new ideas to reduce their carbon emissions such as traveling by train instead of cars,

and utilizing video conference calls instead of business trips. Overall, by 2010 the entire Ashton succeeded to reduce about 20 per cent of its total carbon emission since 2006 (Poster 2010). During this time, according to the interviews with Mr. Charnock and Ms. Harrison (the Secretary of Ashton project), residents of Ashton had completed all types of efforts at the household level to reduce their carbon emissions by changing their behavior by 2010. Hence, the group of residents decided to start renewable energy project to generate their own energy. For the management of renewable energy project in Ashton, the Community Interest Company (CIC) was established in January 2010. Today there are two sites with solar panels within Ashton; they are Ashton Hayes Primary School and the sports pavilion. The produced electricity is sold to an electricity company and the profits are used for other community projects, namely community shop and play ground in the sports pavilion.

About the same timing as the CIC was founded in 2010, one local grocery shop was about to close down and the owner was trying to sell the shop; however there was no taker. According to the talk with Mr. Charnock, the local residents gained the awareness about the possible future figures of their community through their carbon neutral initiative. Then, regarding this shop closure, many residents shared a feeling to take action. It was not just for all households who were using this shop regularly, but residents shared a great degree of concern about those older residents who only have this local shop as a place for daily groceries. Such feeling appeared as a great incentive for the residents group to purchase this community shop from the owner and operate the shop by themselves (Picture 2). Today, there is one manager, three part-time and more than 30 volunteers who are supporting the operation of shop. This shop supports local producers by selling their items. Also, post office service is available at this shop, so that residents can send and receive parcels and also withdraw their deposits. Ms. Harrison, who is the community secretary of the entire projects in Ashton Hayes, has received training by the Plunkett Foundation and she is active in sharing the experience of Ashton and gives support to other communities where residents are also trying to replicate the shop project of Ashton. The project members of

Ashton are also active in promoting community initiatives not only within the UK but also abroad. They are often invited to other community projects to provide advice.

Picture 2 Community shop, sports pavilion, solar panels, and a local pub in Ashton Hayes (Source: pictures by the author)

5.3.2. Ballygally Community Development Association (BCDA)

Ballygally is a coastal community in Country Atrium, Northern Ireland. The village has approximately 1,500 residents of 420 households and it is well-known for its beach. The coastal road is known for an international bike race and the beach is a major attraction for visitors during summer. The community of Ballygally has been experiencing the outflow of young population to large cities such as Belfast, Dublin, and London. Although there is a consistent inflow of new residents to the village since it is one of the major destinations for rural migration for retired people from urban areas, aging of residents is one of the major concerns among the local residents. At Carncastle Ward, a local scale administrative area unit in Northern Ireland that includes Ballygally community, the proportion of age 65+ population is 19.9 per cent which is 4.6 per cent higher than the figure of the entire Northern Ireland in 2013.

One of the major concerns regarding the living conditions of older residents in Ballygally is transportation and access to basic services. There was a local village shop in

the past; however it closed down in 2008 because the owner of the shop wanted to sell the land. About the same time, the post office service was also withdrawn from the village due to the integration of public service. As a result of the closures of local services, local residents had to travel to the central area of closest town called Larne for groceries and other basic services. This was a difficult situation not only for those households without independent transportation, but also for other households since they had to drive to Larne, which is about 16 km for a round trip, and it increased the gas cost for households. Furthermore, according to the interview with Mr. Walsh and other core members of BCDA, there was one incident that everyone realized the importance of having a community shop. It happened that just after the closure of the original shop, there was a funeral in Ballygally; however many people did not hear about these news because there was no common place where local residents meet each other. Mr. Walsh also did not know about this sad news of the community. By this time, Mr. Walsh and his friends realized that the whole community networks that residents had at the community shop and the post office in the past was completely lost. As a response to such shared concern about losing community ties in Ballygally, induced by the closure of local services, Mr. Walsh and three of his friends decided to form Ballygally Community Development Association in February 2009. After a long process of negotiation with the land owner of the original shop as well as the local council, BCDA was funded to build a community hall within the same land area as the original shop. Originally, BCDA was not interested in building a community hall because the members only wanted their local shop back to their community where local residents could purchase daily items and gather to have a chat. However, the type of permission and funding provided by the local council could not be used to start a new business, it needed to be a contribution to the common welfare of community residents, and therefore it was proposed by the local council to start a community hall. After another series of negotiations and consultations, the members of BCDA found a way to lease one section of the community hall to a local retailer, Spar, and hold the rest of building for community function purposes. BCDA opened their community hall with a shop in 2011 which was after 3 years from the closure of original shop (Picture 3). This shop also offers postal

services, so that the residents of Ballygally now can send and receive parcels at this local shop. The community hall has conference room and a large venue for social functions and they are frequently used by the local residents for their club activities. Currently, there is only one paid staff at BCDA; however there are many volunteers who support the operation of the community hall.

Picture 3 Community shop, hall, and other faculties at BCDA (Source: pictures by the author)

5.3.3. Upper Eskdalemuir Development Group (UEDG)

Eskdalemuir is a village of 707 residents located in Dumfries and Galloway Council in Scotland. Since the village is located in the middle of open hills, large part of the land is used for extensive livestock farming. The village is located about 22 km inland from one of the major highways, M6, and the trip requires driving through some hills. Most of the residents are commuting to Dumfries for their jobs. Owing to such geographical location, transportation and access to basic services are two major concerns of residents. There are no local shops, post offices, and clinics available in the community. The closest place for basic services including general clinic and dentist is Langholm which is also about 20 km away from the community. Since more than 44 per cent of the population of Eskdalemuir is older than 55 years old, transportation and access issues are particularly shared concerns among the residents. The community experienced the closure of a primary school in 2004

since there were only four students, yet this incident made a significant impact to the feeling of local residents in Eskdalemuir. According to the interviews with the members of UEDG, Mr. Jennings (Project Manager of UEDG) and Ms. Lilley (Chair of UEDG), local residents felt that they lost a community asset which was an important place to keep social relationships among the local residents going. In the following year of school closure, the UEDG was formed as a residents' group in Eskdalemuir and they received the building of local school through asset transfer process (Picture 4). Currently, there are about 150 members in UEDG and they have done several renovation works with the building and also obtained permission to serve food and alcohol. Today, this building is used as a community hub where the local residents can gather for town meetings, social functions, and seasonal events. UEDG also organized a few times of café days at the same venue where residents can enjoy dinner and drinks. This community hall organized by UEDG has been a common place for the local residents to interact with other residents in the community. Additionally, Eskdalemuir has been experiencing the continuous outflow of young population due to the lack of job opportunities within the community. UEDG also aims to address this issue of job creation by starting firewood production by utilizing their local natural reserves. This project plan is also important to all households in Eskdalemuir since heating in the winter season is one of the major living costs in the village. Today, UEDG is registered as company limited by guarantee and the main activity of the organization is fundraising and the operation of the former school building as a community hub. They organize town meetings as well as different types of events which the local residents can join anytime. Currently, Mr. Jennings works as the manager for the entire operations of UEDG and there are two office staffs that work for fund raising and grant applications. They submitted their application to the Village SOS project which is a nationwide funding project to rural entrepreneurship projects supported by the Big Lottery foundation in the UK. Unfortunately they could not win the funding for their firewood project, therefore they are seeking for another opportunity to gain initial investment to start up their community business.

Picture 4 Community hall and local scenery of Eskdalemuir (Source: pictures by the author)

5.3.4. Feckenham Village Shop

Feckenham is located in the borough of Redditch in Worcestershire. This small village has 670 residents of 289 households[9]. It is about 12 km away from the central of Redditch. Residents of Feckenham are active in organizing residents' clubs according to the leader of village shop. There are clubs for gardening, sports, and other cultural activities; therefore it can be said that Feckenham community originally has a good quality of social ties among the local residents. One of the major challenges that residents of Feckenham were facing before their village shop opened in 2009 was the closure of local shops. According to the other staff of the village, there were many local shops in the main street of Feckenham about 20 years ago. However they all have closed down due to the competition with larger stores in sub-urban areas. For those households who cannot drive a car by themselves, they needed to travel to Astwood Bank or Redditch by public bus; however the frequency of the service is not so often. In addition, it is difficult for the older residents to purchase many items to bring back home by bus especially because those large scale retailers sell items in large portions which are not suitable for households with one or two members.

[9] Figures from the census of 2001. In the most recent census, the population of Feckenham is integrated with Astwood Bank which is a neighboring town of Feckenham. In the census of 2011, Astwood Bank and Feckenham area have 6,052 residents in 2,559 households.

The idea of starting the community's own shop came out from the result of village survey conducted in 2005. This survey identified four major concerns of local residents in Feckenham. They were, i) speeding vehicles, ii) creating more parking spaces, iii) preventing occasional flooding, and iv) shops to buy daily items. In response to these results of village survey, residents formed groups for each identified topic. The shop initiative started with 5~6 members and organized meetings from 2007. They also contacted the Plunkett Foundation for support and had a series of meetings with the mentor to design their shop.

The village shop started in 2009 and today there are about 60~70 local volunteers including a shop staff (Picture 5). It opens on Monday to Sunday. The residents' group for this shop is registered as an industrial and provident society which is a type of limited company in which one person has one share and if the person who holds one share dies then it also disappears. The share cannot be transferred to a member of the household. Today, there are about 300 shareholders for the shop. In this legal framework, Feckenham village shop is required to have a management committee which consists of 8 members. This committee is to deal with the legal structure for the shop project.

The shop sells almost all kinds of daily items almost at the same price as larger stores. They also stock as much local products as possible and their customers prefer to purchase these items over normal retail products. Unfortunately, there are not many local farmers around Feckenham because many of them have already stopped farming due to the pressure from larger corporates. However, the shop is trying to support their local producers by selling their products. The shop received the award for the national "Best Village Shop" in 2009. Today, the shop has its café section inside and many people stop by to have a chat with other residents and shop staff.

Picture 5 Feckenham Village Shop (Source: pictures by the author)

3.3.5. Fordhall Farm

Fordhall Farm is a community-owned organic farm with more than 8,000 shareholders from all over the country and also from abroad. The farm is located about 3 km outside Market Drayton in Shropshire. Its farm size is 140 acres and it includes not only farm but also wetlands, woodlands, and streams (Picture 6). Fordhall farm has been an organic farm for more than 65 years, and this is the core value of their business. They keep free range livestock and produce organic vegetables. Today, the farm operates its own shop, selling not only meat and vegetables but also their processed products such as cheese, jams, and vinegars, and small restaurant. In addition, Fordhall Farm is very active in providing food education to children from local schools. They organize workshops in their farm and teach them about where the food we eat come from. Unlike previous community projects, Fordhall Farm is an individual farm business that is owned by small shareholders and operated by hundreds of local volunteers. Currently, there are about 20 staffs for the farm operation and administrative work. The farm is also devoted into food education, particularly for children. They accept classes of local schools.

The main farm of Fordhall was started by Mr. Arthur Hollins, the father of current main operators Ms. Charlotte Hollins and Mr. Ben Hollins, in 1929. Mr. Arthur Hollings

had a strong belief in organic farming and Fordhall became one of the country's first yoghurt producers. Although Fordhall was successful in its business, the farm was exposed to the pressure from the developers. Its neighboring larger farm was interested in expanding its production and also the landowner of the Fordhall farm wanted to sell the land in 1991. After a long time legal fight with the landowner and developer, the Fordhall had to face its financial issues caused by the cost for the legal process and also the shock by the outbreak of foot-and-mouth disease that spread in 2001. After the long legal battle, Fordhall faced its possible eviction; however Ms. Charlotte Hollins and Mr. Ben Hollins, returned to the farm and first succeeded in the negotiation for 18 months extension of the tenancy in March 2004. Later, by 2006 they also succeeded in collecting more than 8,000 shareholders with £800,000 from the all around the country and even from abroad. Their successful fund raising campaign made them the country's first community-owned farm. The main body of Fordhall is the Fordhall Community Land Initiative which envisions the community involvement in organic farming operation both in terms of financial support but also actual operation and experience through volunteer work. This entire process of saving a small family-owned organic farm represented the situation of the majority of small scale farmers in the country and this drew a great amount of public interest on the relationship between large scale developers and local farmers. The success of Fordhall was found encouraging to the other small-scale farmers not only within the country but also in abroad.

Picture 6 Organic farm, farm shop and restaurant at Fordhall Farm (Source: pictures by the author)

3.3.6. Hill Holt Wood

Hill Holt Wood is an environmental social enterprise that works primarily for woodland management in a 200 hectors forest area in Norton Disney in Lincolnshire. They produce firewood for sale and timber to build their own facilities. Hill Holt Wood also utilizes their woodland area to provide education and training for the youth with mental health issues, especially at the age between 16 to 19 years old. Hill Holt Wood is located in about 16km on the south-west of Lincoln. The mission statement of Hill Holt Wood is to provide the value of ancient woodland for the 21st century. For this mission, Hill Holt Wood takes a position of economic conservation which realizes the importance of economic dimension of nature conservation activities to achieve its sustainable operation. In the case of Hill Holt Wood, it ensures its sustainable operation by a mixed income sources. Currently, their main business operation is on education and training. Besides the education and training for the youth, Hill Holt Wood also provide training for university students by accepting them as interns from the architecture department of local universities. These interns are trained to build actual facilities for Hill Holt Wood by utilizing the available timbers from the woodland. These buildings were awarded many prizes because of their new design as well as very high quality eco-building (Picture 7). Hill Holt Wood also offers the services for social gatherings and events. The venue has a large size hall which can host general meetings, conferences, and also wedding ceremonies. There is also a cooking facility, and therefore food service is also available. Hill Holt Wood has an organic farm that utilizes wood materials from their woodland and water tanks to keep rainwater for watering their garden. Currently, Hill Holt Wood employs 35 staff members. In addition, there are 8 board members for its committee and 30~50 learners and trainees on regular bases.

The founders of Hill Holt Wood, Mr. and Ms. Lowthrop, purchased the original forest of Hill Holt Wood in 1995 and started their business. The woodland was not in a good condition and all valuable trees were already cut for sale. However, their main interest was not to make a large profit through forestry business, they were more interested in

establishing a sustainable social enterprise in terms of its economic, environmental, and social performances. In other words, Hill Holt Wood has its primary interest in establishing a new form of enterprise that addresses social issues through the sustainable management of woodlands. However, as they started this woodland management business, he received the main criticism from the traditional conservationist- traditional nature reserve groups whose principle is to conserve the original forest of the area and somewhat consider the business approach for woodland management as a bad thing. They think that conservation should not be commercialized. On this point, Hill Holt Wood takes a point of economic conservation which realizes the importance of economic viability for sustainable conservation activities.

After 10 years of operation as an environmental social enterprise, Hill Holt Wood succeeded in its economic conservation principle, yet there was a need to involve the local communities in their operations more since the woodland is fundamentally a local resource that should belong to the local communities. Therefore, Hill Holt Wood transferred its ownership from Mr. and Ms. Lowthrop to the 12 local communities in Norton Disney area. Today, Hill Holt Wood is owned by its community management committee formed by the local residents. Such scheme of community-owned economic conservation initiative is a quite unique business model. The proposal was based on his belief that since the business of Hill Holt Wood is locally based, its ownership should be taken by the local residents who should become employees of the project.

Picture 7 Facilities and woodland of Hill Holt Wood (Source: pictures by the author)

3.4. Results

The qualitative data analysis on the collected interview data provided the following four common characteristics and two challenges in their operations among the studied community projects:

3.4.1. Common characteristics among the community projects

3.4.1.1. Responding to community or social concerns

The first common characteristic among the studied community projects is that they are all addressing the general concerns of community residents or wider social issues. The interpretation on the type of concern and how the project takes it to develop to a project are different among the projects; however they commonly set their target to the people's concerns as well as their daily needs through the projects.

Out of the six community projects, four of them; Ashton Hayes, Ballygally, Eskdalemuir, and Feckenham, are managing either or both community shops and community halls. These projects are responding to the concerns of local residents which are the closure of local services such as a grocery shop, post office, and primary school. Such

service closures brought two major concerns related to the living conditions of rural residents.

The first concern is about the access to basic items and daily services. Many of the local service providers in rural areas have faced a difficulty to manage their businesses and eventually closed down. Also, due to the budget cut and merger policy of public facilities, some of the local schools, clinics, and post offices were also withdrawn from the countryside where their operations tend to be costly. Regardless the type of local services being closed down, this situation brings a great degree of anxiety on the living conditions in rural villages, especially as the number of older residents is expected to increase and they often stop driving as they get older. It is therefore a critical issue for rural communities to secure the access to basic services. Indeed, the closure of local services is affecting the living conditions of those households without independent transportation directly. It also affects young families with children as they have more occasions that require them to go out from their village such as the commute to works and schools, grocery shopping in larger retailer stores to get more products on cheaper prices, and dentists and clinics when their children need treatment. Such living conditions will end up a higher living cost not only at young families with children but generally at all rural households. The secretary of Ashton Hayes projects, Ms. Harrison, mentioned that closing of local shops would require a longer distance of travel for small items which is not economically viable and environmentally friendly and also ends up with higher gas cost for households (Bradbury, 2014). Similar points were also raised in the interviews with community project leaders.

"there is quite an aging population in our village, and there is more and more of them who have given up driving. But the transport from here to Larne is quite poor. Just for someone who cannot drive and wants to get milk and bread, there is nowhere to go. One of the difficulties was, if someone wanted to go and get some small items, it takes two hours to just wait for a bus to get back again. So, it is not reliable. And even if you can ask others for transport, it is not so good because you have to be dependent on others." (Mr. Walsh, Ballygally)

"People need to travel to the next village or another supermarket which are both about five miles away from here. If people do not have their own transport, it is difficult because there

are very few buses. . . . They are not regular enough. They come three times a week. It takes much more time to get to Redditch, and if you get a lot of shopping, then it is still difficult to get back." (Mr. Walker, Feckenham)

"that was the last shop we had and if it is not there then we need to go to the next town to shop. Everyone knows that older people in our village need to cope with a tough situation if it is not there. It (our shop project) is about public spirit that people want to keep the shop." (Mr. Charnock, Ashton Hayes)

The second impact in losing local services is about the decline of daily communication among the residents. Local shops and pubs, post offices, and schools are recognized as common places for the residents to meet with other members of their communities and have daily communication. Those residents of communities which experienced shop and school closures felt that they have lost the chance to meet with others and have a chat with them in their communities. Those local services that they had before were functioning as a place to enrich the social ties among the local residents. Among those four community projects which are addressing local service issues, they are motivated to reinvigorate the daily communication among the residents as much to maintain the original service itself. Some of the comments from the interviews suggest that the conversations in these common places are one of the key occasions to know about what is happening in their communities. The members of shop projects find this point of recovering the sense of community among the residents essential to maintaining good living conditions in their communities. Such ideas are well depicted in the following comments by the project leaders.

"it (school closure) removed a natural space where people can see each other by chance. For example, a church, if you are a member of a group you can go there and meet your friends. If you have a pub, you can say "I'll see you at the pub tonight", you know that someone you know may be there and you can meet them by chance. My view is that this is an important part of maintaining social ties in our community." (Mr. Jennings, Eskdalemuir)

"There was one time at the Church; the priest told us that there was a funeral in our village. We were surprised because none of us knew about it. Since we did not have our village shop, that was a place everyone meet each other and have a chat, we did not know

about this. I felt terrible (about the fact that no one could know about the funeral). This is about the whole community thing, but it was completely messed. It is important for us (to know what is happening in our village). People did not hear about good things, like things about our children and grandchildren any more. There are things about local people and relatives that are important for the entire community." (Mr. Walsh, Ballygally)

"if you talk with these people who work in the shop, they have often experienced a few years after their retirements and felt a bit isolated. If you work at the shop, serve people, you suddenly meet with people and make all these friends. It is a good social interaction." (Mr. Charnock, Ashton Hayes)

"People in the village just come here (village shop) and have a cup of tea. We have a chat. Sometimes they bring their children. Our shop is a good bonding place for this community. It is a good cross-section for this community, really. " (Ms. Mason, Feckenham)

The other community projects, Fordhall Farm and Hill Holt Wood, have started differently from those projects about service provisions at the community scale. They have started from the personal visions of the leaders and addressed wider social concerns. For the case of Fordhall, the mission is to establish a model of community-owned organic farm which is economically viable and competitive in the globalized market environment. In the case of Hill Holt Wood, it was about building an environmental social enterprise that can achieve economic viability by sustainable woodland management. Additionally, the same characteristic is found in the initial stage of Ashton Hayes in which the original idea of the project, to be the first carbon neutral community in the UK, came out from the personal vision of Mr. Charnock about the climate change issue. Regarding these three projects, it can be said that the community-based approach is taken as a mean to tackle wider social concerns, namely the market pressure on small-scale farms, establishment of new type of enterprise with achieving the balance of environmental and social viabilities, and the local practices to the global scale environmental problem. These visions of leaders can be found in the following comments from the interviews:

"We moved here not necessarily to do a profitable business, but to make a good living for our family from a small area of woodland. This could be done by two things. One is producing a business from woodland, and the other is reducing our living cost. This is about balance. You do not need to earn so much because you are living with reducing your

living cost, but you are still meeting the 21st century living quality. " (Mr. Lowthrop, Hill Holt Wood)

"People appreciate that Fordhall represents 'small beats a big' because the Miller Yogurt Factory, which is just across the street, wanted to develop this land. So, that was obviously a big corporation. Then these little farmers here managed to beat this big corporation (by having 8,000 shareholders). For many people that is really the key point; we made something out of nothing. The enthusiasm of two very young people, Charlotte and Ben, they were 21 and 23 years old when they did it. I think for many people that enthusiasm and driver that two very young people have achieved something so incredible. And it was such a pioneering project because Fordhall is the first community-owned farm in England. That made this farm so unique rather than just being an organic farm." (Ms. Cartwright, Fordhall Farm)

"I went to a talk about climate change in a book festival in Hay On Wye. The speakers gave a fantastic talk about what companies can do, government can do about climate change. It was really interesting and at the end they turned to the audience and said "Everybody in this room is all together on this challenge on individual responsibility. You can go away and think about what you can do about climate change on an individual basis". That was the first time I have ever thought about my actions to climate change. . . . I kept thinking and thinking what can an individual do, it seemed a too big problem for an individual. Then one day, I started wondering if I can persuade my community to become carbon neutral. . . Then I decided to go down to the pub which is currently closed, and tell my trusted friends that I am thinking of proposing this idea. Then I thought my friends would tell me that I am completely stupid, but I was so surprised to hear that they will be fully supportive if I decided to have a go." (Mr. Charnock, Ashton Hayes)

These three projects have started from the strong personal visions of individuals, yet they also place an emphasis on their local communities. Especially, Hill Holt Wood was initially started as a social enterprise and later its ownership was transferred to 12 local communities in Norton Disney. By addressing the issues of poverty and unemployment among youth population, Hill Holt Wood gained the engagement of local residents as volunteers and board members. Fordhall in the past was also an individual farm enterprise, however in order to respond to its financial crisis, it took a form of community-owned farm with 8,000 shareholders who share the same concern on the current situation of small farms in the country. Today, they are active in providing food education to children from the local

schools in Market Drayton. The carbon neutral project in Ashton Hayes started as a community initiative from its beginning though the original idea was introduced by its leader. The scope of project has expanded to community shop, sports pavilion, and renewable energy projects by today. These operations are all addressing the concerns of local residents.

Although the type of concerns these six community projects address varies, they have succeeded to gain the commitment of local residents since they are addressing concerns that local residents really care about or they have succeeded to make a strong link between wider social concerns to the local contexts of each community. Such situation makes the local residents to perceive the target topics of each project as their own matters. At the same time, because these concerns are shared among the residents, the project is convincing for individuals to act voluntarily in actual operations.

The other finding from the interviews suggests the importance of leadership particularly at the initial stage of projects. The residents' participation is one of the fundamental parts of community projects, yet it does not simply occur by introducing a topic. Certain set of processes seems necessary and they need to be led either by the leadership or individuals or groups. Often at the primary stage, there is a leader who proposes an idea and convinces others to join his or her initiative. Through the interview with Mr. Perry from the Plunkett Foundation, local leaders commonly have "exceptional" capacity to form a team and make the project move forward. In the interview he mentioned the role of leaders as follows.

"If you illustrate the growth of community-based projects such as community shops, the process basically goes through three phases. The initial phase is when those co-operative pioneers, those leaders, they are not typical people in a sense, take a local initiative. Nothing is going to stop them. They are exceptional. In this first, stage you have to have these pioneers who have strong passion to make projects happen." (Mr. Perry, the Plunkett)

As it was described, Fordhall Farm, Hill Holt Wood, and Ashton Hayes projects started from the personal visions of their leaders, therefore the role of leadership was

largely to take an initial action to make the project start and ensure the involvement of local communities. In contrast, those projects in Ballygally, Eskdalemuir, and Feckenham started from the initiative of a group of residents. They have emerged as a collective response of residents to their local concerns. In this way, the initial leadership was also performed collectively.

Regarding those projects that were started with collective leadership by a group of residents, there was one commonality found from the interviews, which is that these projects all started from the conduct of needs survey. This survey is often conducted as a part of funding application; however through this process the members of a community project can gain solid evidence to prove that their idea represents the concerns and needs of the entire community. In the case of Ballygally and Feckenham, two community projects include community shop; they conducted a questionnaire survey to all households in their communities. Besides questionnaire survey, town meeting is also used to collect the ideas of local residents. The leader of Eskdalemuir, Mr. Jennings, responded in the interview that they have organized a series of town meetings to collect the residents' opinions about keeping the former school building as a community hall. He said that the project group received an agreement from the participants at the meetings; therefore they could officially proceed to form their community organization as well as to the application for available funding. This process provides tangible evidence about the needs of local residents. The following comments also support this point.

"We had to do a questionnaire first about this project. We needed to prove there is a need for the project. Otherwise, the local council would say "No, you have not asked your residents what they want". That formed the basis of our plan. It was a lot of work for this application. . . . Yes, 99 per cent of the respondents (said that they want to have a local shop). We also had support from four local churches. I think that also helped in conducting this survey because they are a very tight unit community and everybody knows everybody else." (Ms. Lennon, Ballygally)

"The parish council got some funding to prepare a parish plan. So there was a questionnaire sent around to all people to ask them, what they like about, what they don't like about, and what they would like to see happen in Feckenham. After that, we found four

things people want to see happen. . . . The fourth thing was about a shop. So people were invited to join whichever groups they were interested in. I joined a group to start a village shop." (Mr. Walker, Feckenham)

In the case of those community projects started from the initiative of individuals with their strong visions, such process does not necessarily require the general agreement from the local residents. However when the type of leadership is formed more collectively, it seems an important step to conduct a process to gain ground among the local residents about their project operation. Such process is found in those surveys and town meetings with the studied cases.

3.4.1.2. Being multipurpose in project operations

The second common characteristic of the studied community projects is being multipurpose in their operations. This characteristic has made their project management stable in many dimensions. For example, Fordhall Farm sets its organic farming as its main activity, however at the same time, they also operate farm shops and restaurants, and provide food education for children from local schools. In addition, the farm organizes a variety of seasonal events not only for visitors but also for their shareholders and volunteers. The operation of Hill Holt Wood also takes a similar mixture of diverse activities, which are woodland management, education and training for youth, café and organic farming, and providing a venue for social events and conferences. Being diverse in activities provides multiple source of income, and makes their operation stable. Mr. Lowthrop from Hill Holt Wood emphasized, that their income is "very very mixed", however that is why their money flow can be self-sustaining.

"we have always said that the business Hill Holt Wood started is economic conservation, if you want the land managed sustainably you've got to be able to drive income from sustainable management. This income might be very very mixed, but you've got to get an income otherwise you become totally dependent on grants, and then you can never manage the whole countryside without grants." (Mr. Lowthrop, Hill Holt Wood)

Other projects on community shops and community halls are also diversifying their operations, yet their pattern is more of becoming multipurpose in order to respond to the

detailed needs of local residents rather than aiming for the diversification of their income source. In the case of the community shops in Ashton Hayes and Feckenham, they both provide delivery of their products to those household of older residents in the community. Sometimes, they do so to check in when they do not see their regular customers for a couple of days at the shop. The shop in Feckenham and the community hall in Eskdalemuir have the function of community café where people can spend time to chat with their neighbors and shop staff. The shops in Ballygally and Ashton Hayes provide post office service and it has an important role to secure a local cash point and postal service. Such trend of being multipurpose in community projects was confirmed in the interview with Mr. Perry at the Plunkett Foundation.

"Community shops have been always multipurpose. Now about half of them have a café facility, it has this social function part. . . . We have seen communities have done this, they have started from one thing and reached to multipurpose state without really noticing they are being so. Because when you are working at the shop and someone calls you up and asks for delivering some products, as a volunteer you just say "yes, sure. I can send someone to deliver to your place". Then technically you are now providing a home delivery service. You have just done a business diversification but you do not realize that. (Mr. Perry, the Plunkett Foundation)

3.4.1.3. Strong sense of localism

The third finding from the interview is about their tendency to be pro-localism especially in the community shop projects; they have strong preference on local products. Related to the self-sustaining characteristic of the project, this preference on locally produced items differentiates their operation from ordinal supermarkets and mall shops. Despite the fact that community shops are able to sell normal retail products about the same price with larger supermarkets since they do not need to include employment cost in their pricing, their model is preferred by the customers more because their customers can purchase better quality items but also support the local farmers and producers which brings a sense of community to people. Such points were well depicted in the comments at the community shops at Ashton Hayes and Feckenham.

"We are trying to sell those products from our local producers. We have many kinds of vegetables, eggs, milk, cheese, and wine from our local farmers. We also have some honey, bread, and cakes from our local producers too. The price may be a bit more expensive but the quality is better. And I think our customers like local products better because they can support our local community by purchasing locally produced items." (Ms. Harrison, Ashton Hayes)

"We are trying to stock as much local products as we can. They had a tough time in the last couple of years to compete with supermarkets. So it is good to support them and keep their businesses going. The ice cream we sell comes from just down the road. We also have local beer and wine. If we do not have local products, we try to stock fair trade items for wine." (Mr. Walker, Feckenham)

"When they offer local products, then they distinguish themselves form those major stores, they do not try to compete necessarily with supermarkets. What they do provide is basic visions; for those people who cannot get products, but most people are using here as a sort of top up shop" (Mr. Perry, the Plunkett)

In Hill Holt Wood and Eskdalemuir, the sense of localism can be found in their form of ownership. In the case of Eskdalemuir, the closure of the local school was the moment when the local residents felt that they were losing their public asset. Therefore their concern was losing possible social interactions through this public asset. As for the case of Hill Holt Wood, the ownership was transferred to the local communities from Mr. and Mrs. Lowthrop. This was because Hill Holt Wood was aiming to build a locally-based social forestry in their woodland management. For this purpose, the sense of localism was included by transferring their ownership to their community management committee which is composed of volunteer board members. By providing the ownership of local properties (school building and woodland), these two projects ensure to have an appropriate reflections form their local communities.

"the stimulus to form our group was based on the property of our school. I realized this is our last truly public asset for us although we have a church . . . our school was more public in a sense and this was the last one for us. Then I thought it would be important for us to maintain our public asset." (Mr. Jennings, Eskdalemuir)

"we had our own community management committee, and I said to them that I think the community should take over the business. I think the community should be the owner of the business. We became employees and took control. I convinced them, the business was transferred to the community and I became an employee." (Mr. Lowthrop, Hill Holt Wood)

With those community shop projects, the sense of localism appeared more directly in their shop operation by giving priorities to the locally produced items. Such trend is found because those project members as well as their customers share a positive feeling by supporting their local farmers and producers. As a consequence, these shops could differentiate themselves from the ordinal supermarkets. One of the shop staff in Feckenham also mentioned that some items are cheaper at the supermarkets because they sell in larger portions with discount prices; however their customers prefer to buy locally produced food because they are safe and better in quality. Ultimately, many of the community shops are having the customers with the same preference; hence their business is largely self-sustaining. Along with being multipurpose in their operation, the sense of localism among the involved members helps community projects to become viable. Similarly the positive outcomes were identified with the case of Eskdalemuir and Hill Holt Wood. By having a community hall which used to be their primary school and environmental social business in their local woodland as community owned project, community residents act more voluntarily to make the project better. This has been achieved not only by participating as volunteers but also being the customers for their services.

3.4.1.4. Networking with other projects

All of the studied communities are very active in engaging with other community projects, external supports, and other interest groups. In the case of community shop and community hall projects, they are all taking part in the community project network developed by the Plunkett Foundation. Among those four community projects which have community shops and halls, Feckenham consulted with the Plunkett from the beginning of their initiation. The other three have established their organization by themselves, and later were included in the Plunkett's community shop network. Generally, these projects find the information through this network very helpful, especially those updates about other

community projects, changes in legal structure, and general information about the retail are found practical by the community project members. In addition, the actual visit to successful cases of community shops in the same region, it is also found that there is a good support to establish personal relationship with other community projects.

"the Plunkett organized a meeting with the other four community shops and they published a newsletter with their latest development. They also report any new changes on the law, and anything else that could affect our community shop. They are helping to make this network of community shops which are near to each other. They help us to get together to buy products and produce something together. It may make the price cheaper. We are not near enough to anybody else to benefit from this scheme. They give us some useful information we take some note of. And we have changed some of our operations because they have advised us." (Ms. Mason, Feckenham)

"We spend a lot of time to make communities to learn from each other. . . . We sit down together and go through everything. Seeing what they do in real life is much better than hearing about it. People will be like "I have seen this, I have seen that too, now I understand that" then "ok, now we can do it too". And this meeting creates a bond between these two shops, so if they need support, they can always call them for some practical advice by people who have gone through that process. " (Mr. Perry, the Plunkett Foundation)

Some of the studied community projects receive much interest not only from other communities in the UK but also from other countries. They also have a strong interest in sharing their experience with others who are interested in starting similar projects. Such communication exists in a mutual way and they are eager to learn from others from outside. For example, Aston Hayes project is considered as one of the pioneering community projects in the UK, therefore they received a request from the national government to visit other communities to provide support to them. Fordhall farm has also received many guests who wish to learn about their management of community-owned farms. These points were well illustrated in the following comments of project leaders.

"We always would like to spread to the world. And we always welcome any knowledge and ideas from outside. So if they give us certain ideas and advice from their background, those are really beneficial for us to listen to how things being done in other parts of the world.

Charlotte recently had a visit to Turkey with a group to see how farmers are diversifying their operations in Turkey. They are doing another visit to Italy soon. So these things are really about sharing knowledge across the countries." (Ms. Cartwright, Fordhall)

"In the meantime, there was a huge demand of communities across the Britain, who saw what we are doing and they wanted to do the same. I went to a festival by these communities and the government also came to provide some money. There is a government body called DEFRA, they gave us money for travel expenses and they said communities are all interested in what you are doing, we will pay you to travel to visit them. So a few people, 7 of us, we made a presentation and we went around the country to launch little village projects."(Mr. Charnock, Ashton Hayes)

Those comments about the benefits of being connected to the network suggest that it functions as a useful means to have practical advice from those projects which have more experience; this is particularly pronounced with the case of community shop management. At the same time, the active networking with other projects is seen as a way to share their project experiences and also to gain new ideas for those established community projects. The result indicates that active networking among the community projects increases the stability of the entire field of community-based projects in the country.

5.4.2. Challenges in operation and the entire community project

Along with the common characteristics of established community projects, this fieldwork also identified the current challenges in the community projects. This is also important to understand the required skills as well as the effectiveness of community based approaches.

5.4.2.1. Human resource issue

The first common challenge is related to human resource in rural villages. All community projects require one individual with strong leadership or a group of residents who are motivated to run their project at its initial stage. With the studied cases, this part is not necessarily the problem. As they conduct a needs survey or hold town meetings, they could form a group of residents. However, later as they need to do various types of management work, project groups face a difficulty in finding committed members who are

willing to take a certain responsibility for the project, and also those members with specific types of knowledge and training such as an architect or an accountant. These challenges were raised by community shops and hall projects in the interviews.

"*We could not form our constitution because it was quite difficult to make people to really commit to be directors although it was easy to get the members. In our original constitution, every year three directors have to step down and three more could be elected. And the ones outgoing ones cannot stand for re-election for a year. But we are finding it is difficult to find three new people to become directors. So, we revised our constitution and allowed those who have stepped down to immediately stand for re–election of directors. (Mr. Jennings, Eskdalemuir)*

"Nobody had any direct experience of retailer or shop management when we started. Everybody had a lot to learn about the operations. But we are very lucky to have a few people who are experienced in different types of businesses. Also we do not need to pay them because they do it voluntarily, so we have accountant, and legal advisors, and so on. If you got anybody like that, you may want to persuade them to help you." (Mr. Walker, Feckenham)

"The local council asked us 'how are you going to run it (shop)?', none of us have the capacity or experience of running a shop. It is not that we don't want to do, we are totally for it. we wanted to volunteer and so on. . . . the last shop operator obviously had the records from the last time when he was running the shop. So the last shop could tell us what size of the shop should be and so on." (Mr. Walsh, Ballygally)

The other type of challenge regarding the motivation of the members is running out of their energy either at the initial stage of the project or after several years of operation. These points were raised in the interview with the Plunkett as the author asked about those community projects that were closed down. As it is described in the comments below, sometime the process of starting a project is overwhelming to certain groups, therefore the Plunkett foundation also mentioned that they make sure to provide the information about their proposals according to the state of supporting community. Sometime it is an inquiry from an individual who worries about the future of his or her community, or some other times they have already formed a residents' group and would like to know what actual tasks they can start with (Interview with the Plunkett). The other case is that the project members

get tired of taking his or her roles due to various reasons. They simply run out of their energy. The following comments during the interview with the Plunkett describe the cases of project closures:

"there are many dropouts in various stages because it is hard, and they need to raise money by themselves, and they need to start with themselves as volunteers. So, this is a lot to do when you have a busy life with family and everything. So, that was why particularly community shops have heavily relied on retired people or partially retired people. So, virtually the majority of the volunteers in community shops are over 50s. Additionally, quite high percentage of them is actually in their 70s." (Mr. Perry, the Plunkett Foundation)

"The most common reason (for closing a project) is that there is a run out of energy. It does not happen very often but if you have been running a shop for 10 years, and it is the same people, who are running the shop the entire time, and some of the people left or move away, then you are still running the shop but not many people are coming anymore, it could be exhausting. It is also sometimes a challenge to keep a good number of volunteers." (Mr. Perry, the Plunkett Foundation)

5.4.2.2. Finance issue

The second identified challenge among the community based projects is about their financial management. Although this point was not raised in the interviews with Ashton Hayes and Hill Holt Wood, all other four community projects mentioned that they find it difficult to manage their projects in a financially self-sustaining way. Such situation of community projects can be found in the following comments of project members.

"It is not easy to make a profit. Well, this is why a lot of small shops in rural areas were closed down. Because you cannot just make a profit for a person to live off. We have all shop staff as volunteers, so it is running alright now. Though it is difficult to say, it took probably two years to make our shop operation self-sustaining" (Ms. Mason, Feckenham)

"we are always breaking even. We need to be able to make more money to be fully sustainable. Because we are still at the early days with our restaurant, we need a careful management. At this moment our biggest challenge is to make our operations really work and become self-sustaining. . . . One day we expect that we won't be able to ask for so much money from our shareholders, so we've got to make sure that we are self-sustaining our business totally." (Ms. Cartwright, Fordhall Farm)

Such challenge could also be found in getting initial funding for a new community project. In the case of Eskdalemuir, aside from its community hall management, the residents' group of Eskdalemuir is trying to establish a firewood business for its own community since the heating is one of the major concerns among the local residents. They also consider this firewood business as a possible income source for a sustainable management of their community initiatives. This project utilizes the natural reserves in its surrounding forests; however this community business plan is struggling to find its initial funding. The leader of Eskdalemuir said that the major constrain for this struggle is about the number of customers within the village to run the business sustainably. Additionally, the members of Eskdalemuir also mentioned that they are facing a lack of young residents who are willing to participate actively. They are hoping to run this firewood business for a long time initially to secure heating at each household and also to create an income source which the residents' group can use to manage their community hall.

"To run a business it requires secured customers who buy our firewood for next 10~15 years. . . . We could not secure the supply of firewood which gives a guarantee to the investor for the first couple years. Also because the wood is an internationally traded commodity, the competition is high. The business needs local secured consumers to run sustainably. You need to run it for a long term. That was one big constraint we are facing now." (Mr. Jennings, Eskdalemuir)

"The other constrain, although it was never tested by going to recruitment just by general observation, is the lack of any younger individuals who have physical energy and would be willing take the risk of heading that business. If I was 20 years younger I would probably be keen on doing it by myself. A couple of other board members would have been keen on doing it but that is a challenge to a lot of our plans. We had a very limited success in recruiting younger people." (Mr. Jennings, Eskdalemuir)

5.5. Summary

This chapter examined the types of local challenges, common characteristics and common challenges in the selected six community-based projects in the UK. The data collection was done by in-depth interviews with the leader and core members of each community project. The collected data was analyzed by qualitative coding methods. The

findings suggest that residents are commonly addressing their local challenges or/and wider social issues by taking a community-based approach. Their activities are also diversified; hence these projects are multipurpose. Such characteristic of projects increase not only the income diversification but also the meaning of the project itself to local residents since the process of being multipurpose is often achieved as a result of responding to the detailed needs of local residents. Along with being multipurpose, the sense of localism supports those community shops to be differentiated from regular supermarkets. Although the prices of locally produced items tend to be slightly more expensive, those locally produced products were found as one of the key attractions of community shops. Additionally, the sense of localism was also found in the form of project ownership. These projects are also all active in networking with other projects and it makes their operations more stable since such interactions among the projects and communities strengthen the entire community-based project field in the country. As for the challenges of community projects, two points were raised; they are about the difficulty in finding committed and motivated members, and achieving financial sustainability of the project. These findings from this second fieldwork are going to be analyzed jointly with the findings of the first fieldwork by applying the multifunctionality framework in the next chapter. Based on this analysis with the framework, the next chapter aims to deliver the concluding discussion of this research.

6. CONCLUDING DISCUSSIONS

The purpose of this chapter is to bring together the findings from the two fieldworks of this research and discuss them within the multifunctionality framework. This analysis is conducted to respond to the principal objective of this dissertation, which is "elaborating possible responses to the continuous functional declines at the community scale and also to discuss possible future pathways for rural areas" in the era of aging societies. In order to deliver the overall discussions about this main objective, this chapter provides findings in the light of two subsidiary objectives and four subsequent research questions.

The latter section of this chapter will elaborate on the process of community marginalization and policy implications. In addition, the academic contributions and limitations of this research will be raised. At the last, this chapter will be concluded with the future research topics.

6.1. Organization of the Concluding Discussions

6.1.1. Capturing the marginalization process

The first sub-objective of this dissertation is "to elucidate the declining process of rural communities by examining living conditions of rural residents". This point is addressed by setting the following two research questions.

3. On what factors in resident's living conditions does the declining process of a rural community appear?
4. What kind of changes does a rural community experience as it undergoes a marginalization process, especially in the degree of collective actions by residents and the types and quality of local activities being maintained?

The first research question aims to capture the current state of rural communities from the residents' perspective; therefore, its focal scale is set on the individual households. In the first fieldwork of this research, this scale is chosen as the target unit for the questionnaire survey. The second research question has its focus on the community scale.

This scale is considered important since the local residents organize neighbors' groups for various activities regarding the living environment and local events. In the fieldwork, semi-structured interviews are conducted to the community leaders and residents' groups in order to capture the community perspective.

The fieldwork in Kamikoani aims to capture the process of community marginalization among the five community groups established for the purpose of analysis. The past population changes of all 20 communities in the village shops a similar degree of population declines, hence by capturing the current qualities of community functions at each community group, this fieldwork aimed to analyze possible patterns of community marginalization.

The findings of a questionnaire survey suggest that the residents of Group 5, which are the smallest size of communities in the village, found difficulties in access to groceries and basic services, management of both private and communal properties, income satisfaction level, and the forms of social relationships. In addition, the findings from the semi-structured interviews with community leaders and residents' groups suggest that there is a difference in the quality of collective actions among community groups. Particularly the downsize and disappearance of local festivals and ritual groups are observed in Group 4 and 5 communities.

About Group 1 to 3 communities, no significant differences are found both by the questionnaire and semi-structured interviews. However, the result of self-evaluation on the selected 18 factors shows similar patterns of dissatisfaction about the general living conditions across the five community groups. This finding suggests that those residents in Group 1 to 3 also hold a certain degree of anxiety about transportation and access, employment opportunities, and lack of successors, though not to the degree of Group 4 and 5. Overall, community marginalization is present at greater degrees in Group 4 and 5 communities.

Regarding the first research question, those factors on transportation and access, property management, income satisfaction, and social relationships among residents are the four main factors that the significantly less qualities were found in small-sized communities in relation to the larger-sized community groups in this research.

As for the second research question, evidence of downsize and disappearance of local events were found through the semi-structured interviews, particularly on those aspects related to the local festivals and rituals. The findings of semi-structured interviews suggest that those residents' groups for local religious rituals were already dismissed due to the difficulty to maintain the events and some local festivals were downsized since there were not enough children and young residents in their communities.

These findings from the first fieldwork suggest that the type of approaches to be employed needs to be considered differently based on the degree of community marginalization at individual communities. In the case of Group 1 to 3 communities, which are larger than 60 residents in this study, no particular evidence of community marginalization was found. In contrast, those findings about the Group 4 and 5 showed some evidence of community marginalization. Those findings from both questionnaire and interview surveys suggest that the current state of Group 5 communities is likely to be reaching the second turning point in the marginalization framework, after which the quality of community function is expected to drop significantly. Those communities in Group 4 are considered to be at the middle of the second stage. At this stage, those declining functions can only be captured as qualitative declines. The current state of Group 4 communities can be seen as the turning point to further marginalization. Those population sizes of Group 4, 40 to 59 residents, and Group 5, less than 40 residents, are determined as benchmark population sizes in which those different degrees of community marginalization are likely to appear. Based on these benchmark population sizes, it would be possible to anticipate certain functional declines in each community in Kamikoani.

6.1.2. Decline of community function at the community scale and the village scale

As rural areas experience depopulation and aging of residents, the quality of community function gets declined instantly at the community scale. The results of the first fieldwork suggest such functional declines first appear more in the qualitative aspects of local activities, and later they appear in the quantitative aspects in residents' living conditions. The accumulation of such trend of community marginalization ultimately leads a village (or any other boundary unit of rural areas) to a state in which its total quality as a rural system becomes lower. This change at a rural system scale is proposed as "marginalization pathway" for the multifunctionality framework in Chapter 3. While a rural system is directed to this marginalization direction, the system quality declines rather than losing its balance among the three types of capitals as it was the case for the past rural transition also discussed in Chapter 3. Within this marginalization pathway, the entire system is losing the capacity to maintain its system function as in the same scale and quality as in the past. In fact, the current state of those smaller communities in Kamikoani is no longer capable to sustain its community function as its original quality in the past. As more communities are going to lose their critical sizes of population and start to enter the later stages of community marginalization, the whole system of the village is going to be directed to this marginalization pathway.

Alternatively, the divergence among communities with different quality of community function can be regarded as a positive resource for the reorganization of the whole system. The findings of the first fieldwork pointed out that Group 1 to 3 communities have a relatively greater degree of community function; hence these community groups may lead the entire system to another direction in the multifunctionality framework. This point will be discussed further in line with the practical implications of this study in the next section.

6.1.3. Choosing adequate approaches to communities

One of the practical implications of this research is that different approaches are required to make appropriate responses to the different conditions of communities. For those communities with sufficient quality of community function, Group 1 to 3 communities in Kamikoani, revitalization approach is considered more suitable as they are in an earlier state of community marginalization process or even before the process of marginalization. However, as the trend of aging and depopulation in rural areas are largely irreversible, it would be critical to reexamine the meaning of revitalization approach for each case. As Kamikoani may not necessarily gain new population to maintain all its communities; rather it can be seen as a means to explore effective measures to maintain the minimum amount of multifunctionality for the entire village to be a vibrant rural system.

For those smaller communities which are in later stages of community marginalization, the combination of welfare-based approach[10] and soft-landing approach may be considered more appropriate. These two approaches both aim to enhance the well-being of local residents, yet the soft-landing approach includes the idea of closing a rural community with paying a close attention to the needs and feelings of the remained residents during its process towards the community closure (Sakuno, 2006). The idea of soft-landing approach is also supported by a group of scholars who initiate strategic rural reorganization form rural planning perspective (Hayashi, 2011; Ichinose, 2010). In the case of Kamikoani, those residents in Group 4 and 5 communities would benefit more from these approaches, yet there will be a remaining question as to who should implement these approaches. Conventionally, such approaches are considered as the role of government; however, this issue fundamentally includes the discussion on values and norms regarding rural areas. Whether a rural community should be closed, reorganized, or revitalized should not be

[10] Originally "fukushitekikea "in Japanese. This idea claims that to those communities in later stage of community marginalization, it would be more effective to provide those supports on the residents' living conditions than revitalization approach which aims to recover the population size or revive local economic activities.

determined thoroughly from the external perspective. As Sakuno (2006) emphasizes such a process needs to be conducted with due respect to the views of the communities concerned.

For the initial step to address the issue of community marginalization, it is important to realize the considered time scale for approaches are different depending on the state of each community. For those communities in an earlier state of community marginalization or even before its process, it would be possible to set next 10 to 20 years within its scope of revitalization approach. Though it may also be the case that depopulation and aging of residents continue at these communities, it would be possible to illustrate their possible future states with having such population projections as their precondition. However, for those smaller communities that are experiencing their marginalization at greater degrees, it would be more important to examine what can be done within a short period of time. This point makes the meaning of revitalization different to each community. For Group 1 to 3 communities in Kamikoani, revitalization implies forming residents' groups for new local activities, discussing possible new business activities in the village, and planning the way to attract rural migrants. This type of revitalization is well aligned with the suggested means of rural revitalization by the government (e.g. eco/green tourism promotion, selling local items to outside, product development by the 6th industry approach[11]). As for the case of Group 4 and 5, it would be more beneficial to discuss the ways to enhance the welfare of residents by securing their living conditions. In the current approaches to rural areas, such differences of demands among the residential communities within a village (or any other administrative unit in rural areas) are not dealt with adequately.

[11] Originally "rokujisangyouka" in Japanese. It is a promoted mean of regional revitalization by the national government. The idea was developed by combining primary, secondary, and tertiary industries (multiplying 1st, 2nd and 3rd makes it 6th). A typical example of rokujisangyo is that a farmers' group conducts a new product development, marketing, and sales of their products all by themselves. This approach is considered as effective to create a viable business in rural areas.

6.2. Analysis of Community-Based Initiatives

6.2.1. Possible future pathways for rural areas

The second sub-objective for this dissertation was "to analyze community-based initiatives in order to discuss possible future pathways" and it was planned to achieve this by answering the following two research questions.

3. What would be a legitimate process to discuss possible pathways for rural transitions at the regional scale?
4. What characteristics are the common features as well as challenges among the established community projects?

For the first research question of the second sub-objective, the multifunctionality framework was applied as the overarching analytical framework to elaborate discussions on possible pathways for rural areas. Those findings from two fieldworks were analyzed based on this framework. The fieldwork in Kamikoani suggests the marginalization pathway as the fourth possible direction for rural areas. Given the divergence among the communities within a village, the marginalization pathway is present in smaller communities while others are maintaining certain quality of community functions. In order to sustain such system quality of rural areas, it would be important to explore other possible future pathways; these have been suggested by the recent discussions on the multifunctionality of rural system (Holmes, 2006; Marsden & Sonnino, 2008; Renting et al., 2009; Wilson, 2008, 2010). Based on the recent works of Wilson (2008; 2010), there are three possible future pathways for rural system; they are (i) Super-productivist, (ii) Deagrarianized, and (iii) Relocalized low intensity rural systems. These three pathways are determined by the quality of target rural system that can be captured as the formed balance of three types of capitals, namely economic, environmental, and social capitals. Those proposed pathways are not exclusive to each other. Instead, one rural system can hold the mixed quality.

6.2.2. Common characteristics of community-based projects and their future direction in the multifunctionality framework

For the second research question of the second sub-objective, "What characteristics are the common features as well as challenges among the established community projects?" the fieldwork in the UK examined community-based projects in rural areas. All projects involve the active participation of local residents at the community scale. This fieldwork found four main attributes across studied six community projects which are (i) Responding to the community or social concerns, (ii) Being multipurpose in their operations, (iii) Strong sense of localism, (iv) Networking with other projects. The first point, responding to community or social concerns, has a great impact on the degree to gain support from other members of the local community. Among the six projects, three projects address the access issue to daily needs and basic services, and another project manages a former school building as a community hall where residents can visit for social gatherings. These four community projects are particularly convincing to the local residents since they address the locally shared concerns. Often this initial appeal to the other members of the same community is critical for the project to find those core members who can commit and those motivated volunteer members who can support the project at any stage of the project. The other two projects set wider social concerns in their primary objectives, namely education for the youth, nature conservation, and building an economically viable community-owned organic farm. By transferring the ownership of those business activities to local communities or shareholders, these two projects have also ensured the active participation of the local residents.

The second and third common characteristics of studied community projects, being multipurpose in operation and strong sense of localism, are both key aspects to achieve financial sustainability of the projects. Often community projects diversify their services as a result of responding to the customers' requests. For example, volunteer staffs at a community shop offer delivery service upon request of regular customer, or a community hall often holds a license to serve alcohol, so that the space can be used as a small pub for

the community residents. Such reactions to the local needs ultimately make these community projects, diversified in their sources of project income. This income diversification was more strategically set with the project that started as an individual enterprise. In addition, the strong sense of localism is much reflected across the studied projects, especially in those community shops. By giving priorities to those locally produced items for the sale, they can differentiate their shops from the supermarkets. Their customers prefer to buy those items from local producers because they come with better quality and it includes the sense of support to them. While these two points contribute to the financial sustainability of the projects, they also nurture the sense of collective ownership for the projects since these projects have a mechanism in which the local residents can support and improve the projects by purchasing items from and using the offered services.

The fourth common characteristic, networking with other projects, contributes for the robustness of the projects by supporting the initial establishment of the projects. For practical side, this network of community-based projects has a function of the platform to share experience and knowledge on the management of similar community projects among interested residents' groups. This platform for interaction is often found very helpful to those residents' groups who have just started their projects. At the same time, this network of community project is also useful for the entire group of community projects as the public understanding is extremely important for the whole sector of community-based initiatives. They are also active in engaging with the national supporting organization, the Plunkett Foundation, to promote their initiatives.

The community-based projects in the UK can also be captured within the multifunctionality framework. As it was reviewed in Chapter 3, the political scheme for agriculture and rural development has shifted from productivist to post-productivist, and further to sustainable development paradigm in Europe. As such transition is reflected, those bottom-up initiatives as community-based projects are preferred today in the rural areas of the UK. The fact that community projects are spreading all across the country (the

Plunkett Foundation, 2013) suggests that the pathway towards the relocalized low intensity rural system is preferred. Those common characteristics of community projects also suggest the same direction of future transition. Those findings from the fieldwork in the UK demonstrated that the studied community-based projects are designed in such way as to cover their social dimension by addressing the local needs and wider social concerns, and economic dimension by achieving financial sustainability through income diversification and strong sense of localism. In addition, the networking with other projects and external supports ensure the channel for each project to have access to required skills and knowledge.

While this community-based approach seems also appropriate for rural areas of Japan, it is important to note one key difference between the two countries, which is the pattern of internal migration. As it was reviewed in Chapter 5, there is a strong trend of rural migration among the middle and later age population groups in the UK (CRC, 2010), while the concentration of population in megacity areas is pointed out as one of the main causes of rural decline in Japan (Nihon sousei kaigi, 2014). Such trend of rural migration in the UK, particularly that of early retired members, has a positive impact on rural economy both as a group of residents with more dispensable money and greater capacity as local entrepreneurs (Bijker & Haartsen, 2011; Hugo & Moren-Alegret, 2008; Mitchell, 2004; Stockdale, 2006a). Such rural migration supplies not only physical population size but also the required human capital to today's rural development in the UK. Such differences on the pattern of internal migrations in these two countries need to be treated carefully in analysis; hence the multifunctionality framework is applied to discuss these two distinctive fieldworks within one research. More specifically, community-based projects in the UK are set as reference cases to examine alternative rural transition pathways within the multifunctionality framework. The following section discusses the current initiatives taken in Kamikoani in line with the findings from the second fieldwork in the UK.

6.3. Practical Implications for the Marginalizing Communities

6.3.1. Redefining the system boundaries: forming new units based on different types of social functions

As rural areas have gone through a series of past transitions and recent aging of their societies, the community marginalization phenomenon has occurred. This situation implies that the current system units of rural communities are losing their capacity to maintain the minimum community functions to sustain their system quality. The fieldwork in Kamikoani identified a set of declining factors in different sizes of communities that can be explained as the consequence of community marginalization. These factors were examined based on the residents' perspectives on the current living conditions.

In order to respond to the marginalization of rural communities, the current system boundaries need to be redefined according to the types of functions that residents are facing declines. Figure 47 shows the idea of redefining system community boundaries for four different types of local activities. The first redefined boundary is about daily activities shown in red color circles. These activities imply smallest scale of daily activities related to individual households and each community, such as, for example, cleaning public pathways, community halls, and removing snow in winter. System boundary to maintain this function can be formed among the physically close communities since those functions covered by this new unit will be more frequent than others.

The second proposed boundary shown in blue circles is to address transportation and access issues. This is one of the most frequently cited factors in the questionnaire survey related to the living conditions in the village, indicating that residents of all community groups are feeling a significant level of anxiety. Currently there is a local NGO that provides transportation service in Kamikoani. On the one hand their service has a good coverage, as it is available to all villagers. However, on the other hand, their current operation is heavily dependent on the role of the volunteers who serve as drivers and financial management. These challenges of the transportation service need to be equally

shared with other villagers. Since transportation and access issues were originally identified as the issues at the individual households, this system boundary introduces a new function to the communities. For the actual operation of this boundary of this new function, those community-based projects in the UK can provide useful insights for the actual implementation; the initial step will be a conduct of demand and participation survey to the residents concerning whether they would like to have such local services, and also if they are willing to participate in the project. This second grouping of communities need to be set at a relatively large scale according to the sizes of community-based projects in the UK, which were around 700 residents at the smallest scale (Eskdalumuir and Feckenham).

The third system boundary is related to local events and traditions. One of the major findings from the fieldwork in Kamikoani is that the evidence of community marginalization first appears more in qualitative aspects such as the scale and quality of local events and the grouping for their ritual groups. Those qualitative declines in local traditions tend to appear in a similar pattern among the communities located in the mountainous areas since the types of local knowledge or local rituals are often similar to one another. Therefore, this research suggests to form another system boundary shown in green color for this local events and tradition related functions by linking communities geographically separated by mountains.

The fourth redefinition of system boundary is for the soft-landing approach. It will be inevitable to experience closures of some communities as the entire village is experiencing continuous aging and depopulation. In order to discuss key points for such final state of community marginalization process, it would be important to set a place to exchange ideas about how to deal with the ultimate closures of small communities with proper cares. Those smallest scales of communities which belong to this grouping tend to have a similar set of concerns which cannot be shared easily with larger communities. For example, the management of communtiy centers, cemetery space within the community, and public paths in the communal forest would be difficult for those smaller communities in mountainous areas. Therefore, it would be important to set such a platform to share the

residents' ideas and feelings about their future shape. This boudary is also important to record the local knowledge and experiences of those communities to succeed their stories to next generations.

For the implementation of redefining community boudaries, it would be important to consider the accessibility among communities in the new boudary settings. Particualry, the developed road conditions allow residents from any communities to go beyond the set boundaries (Figure 47). Such active and often voluntary based support among the local residents should be encouraged. However, in contrast, the idea of redefining community boudaries pays a close attention to the sense of individual communities as independent units of local systems. As all 20 communities in Kamikoani have been the primary units for local activities, new apporaches should respect the autonomy of these existing system boudaries. It could be more effective if all communities are connected as one large network in which individual residents form different groups according to specific funcitons that they need. However it is concerned that this network-based approach may not sufficiently respond to the autonomy of existing communities and also capture the different demands of residents across 20 communities. The results of fieldwork in Kamikoani suggest that there is a certain degree of diversity in the current living conditions among, at least, five community groups defined by their population sizes. The approach of redefining community boudaries calls for more structually set system units in order to respond to the diverse demands of communities that are in different phase of community marginalization process. In addition, partiuclar functions such as those regarding soft-landing process for marginalizing communities, may not always be the main interest of a large scale network set at the village scale. The proposed approach aims to create the linkages among those communities which have similar degree of anticipation abou their future states.

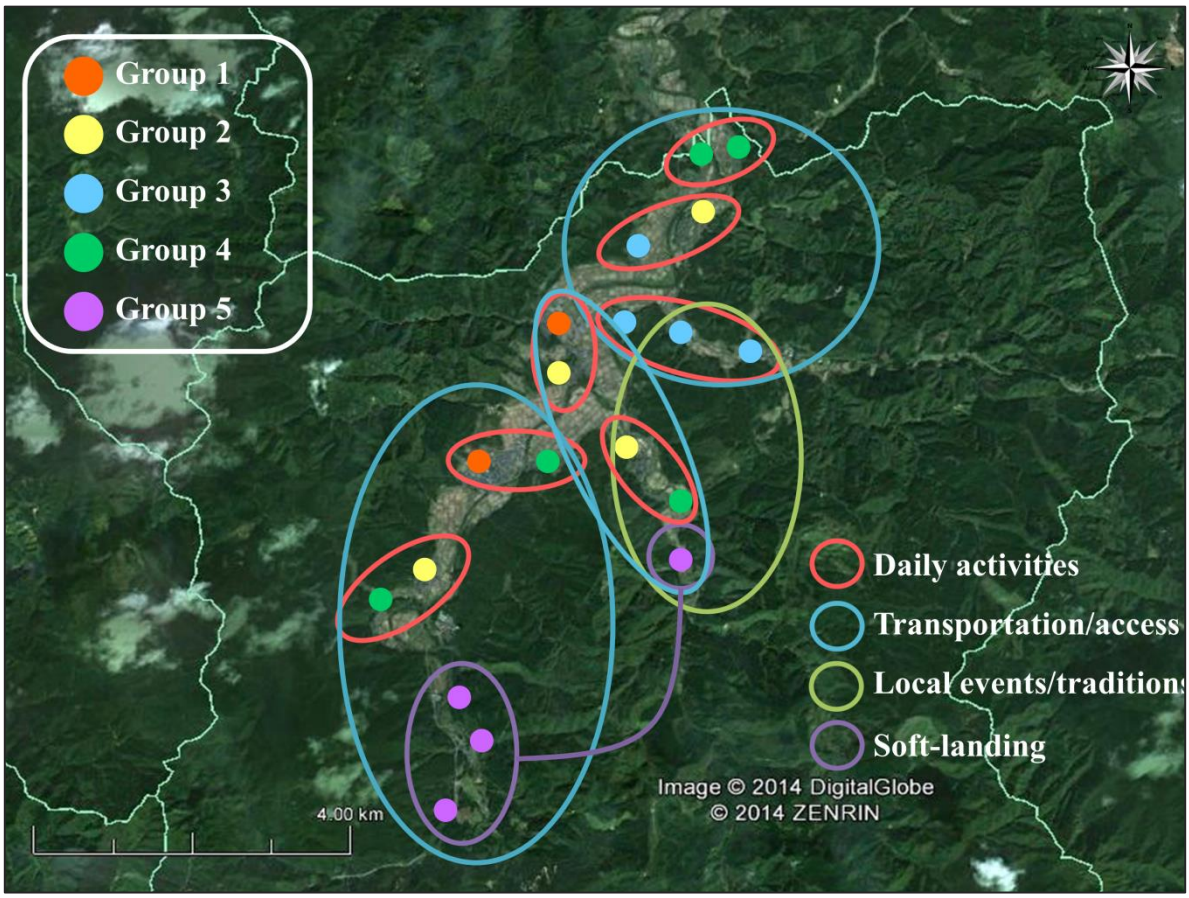

Figure 47 Redefining system units for different functions (Source: Google earth, base map)

The idea of redefining system unit itself is not necessarily new. In fact, the Ministry of Internal Affairs and Communications (MIC) provides a funding scheme to promote reorganizations of rural communities in the remote and depopulated areas[12]. This funding supports the local government to build new facilities to promote the reorganization of existing communities and also to invite rural migrants. It can also be used for the related activities to the reorganization of rural communities.

[12] "Kasochiiki shuraku saihen seibi jigyou (Project for reorganization of rural communities in the remote and depopulated areas)" is a funding scheme for the local governments to promote reorganization of communities in the remote and depopulated areas.

In the case of Kamikoani, there were four communities that were closed in the past, however, it was due to the construction of a dam for two communities, and the other two communities were voluntarily closed since they had originally emerged as branch communities of their main communities. In reality, the strategic reorganization and closures of rural communities require a long-term negotiation and much dedication of the officers who organize the negotiations with residents. With that respect, actual reorganization of communities is quite difficult as it can only be achieved by a great degree of responsibility and pressure on the local officers. Therefore, it would be more practical to consider redefining the existing community units based on the specific types of functions that residents would directly benefit by the reorganization.

Another major difficulty in redefining the system boundaries would be the strong sense of belonging and the local leadership at each community. Through the interviews and informal discussion with villager during the fieldwork in Kamikoani, what we found was that the residents have very strong ties and everything is discussed among the residents in each community. This can be seen as a positive thing as the residents are strongly tied to face their own issues, yet it could possibly hinder support from the outside.

For the studied community projects in the UK; the church district was one of the utilized units at their initial formation of residents' groups for their initiatives. In the case of Ballygally, local churches supported the project group to conduct the demand survey. It was similar in Eskdalemuir that residents originally had informal groups at the local church such as women's associations. In the case of Feckenham, Ashton Hayes, and Hill Holt Wood, the role of local churches were not raised; instead, they had local clubs and associations. These original informal organizations of local residents play an important role to connect residents and also to share the ideas for their projects. These residents' groups are formed in the wider geographical boundary with larger number of residents across their communities. By this way, the chances of getting committed members and motivated volunteers for the project would be higher. As for the case of rural areas of Japan, each rural community emerged at relatively smaller scale within geographically separated

boundaries. These rural communities are equal to the unit for the formation of residents' groups and collective actions for production and maintenance work at their own communities. The relationships among the member households are also strong as they often have their family relationships as the head and branch houses. In general, rural communities have their own neighbors' associations in which they have the leader and board members for each. This is a common practice regardless of the difference in the size of community; therefore each rural community has strong sense of belongings at each unit and holds sense of independence. The feeling of self-autonomy created within this relatively smaller units are rigid, hence they manage their daily activities based on this unit. Despite the fact that many rural communities are experiencing decline of community functions, this strong sense of self-autonomy at the individual community scale could be an obstacle for new formation of system units. This point is also stated in the report of MIC on the reorganization of remote and depopulated communities that simple grouping of communities would not be sufficient since they hold their own established system regarding the management of their communities. Therefore it will be important to establish a new organization body for the management of various social functions for a larger region. For this process, it may also be required to revise the current system units of rural communities (MIC, 2013).

6.3.2. Engagement with external entities

While the redefinition of system boundaries of rural communities based on the type of declining functions can be considered as an internal approach, it would be indispensable for the village to consider the relationship with external entities. Positive impacts of interacting with external entities are raised by Hiroi (2008) and Jane Jacobs (1992). They discuss the concept of community and argue that the engagement with external entities brings certain diversity to the community, so that the residents of a community realized their roles to respond to such new inputs from the outside. This situation makes the quality of community more socially stable as the external entities brings a stimulus, such as new ideas or capitals, and internal residents take a continuous reaction to them (Hiroi, 2009;

Jacobs, 1992). In practice, this can be achieved by an engagement between the local residents of community and visitors from outside. The role of local residents is to provide the permanent maintenance of the community place whereas the role of visitors is to provide diversity from the outside perspective. The engagement between the internal and external entities creates mutual influence that can provide creative new ideas to the community. The remaining question is where and how such engagements with external entities can be developed.

Figure 48 shows the images of the potential external entities that the village could seek for engagements. They are classified as three categories by the distance from the village. The first group is composed of neighboring towns. These places have already well included in the residents' daily lives as more than half of the working population are employed in these towns. Also, many residents travel to these locations for grocery shopping and medical services. The prefectural capital city, Akita city, is raised as the second external entities for engagement. This site is also familiar for many households since 30% of the out-migrated family members are living in Akita city. On the occasion of Kamikoani Project, the majority of visitors are from Akita city. At last, the third external unit is classified as major cities. Currently the engagement with these places is relatively weak compared to the other two external entities. It will be a question remaining for future research to identify what kind of engagement should be created with different types of external unit. One of the possible interpretations based on the multifunctionality framework is to classify the types of engagement in economic, environmental, and social dimensions. While the internal redefinition of system units would largely concentrate on social and environmental dimensions, the economic viability may require a specific type of engagement with external entities. Actual activities related to these three dimensions can be seen in the recent activities in the village by the three specially assigned members for regional revitalization.

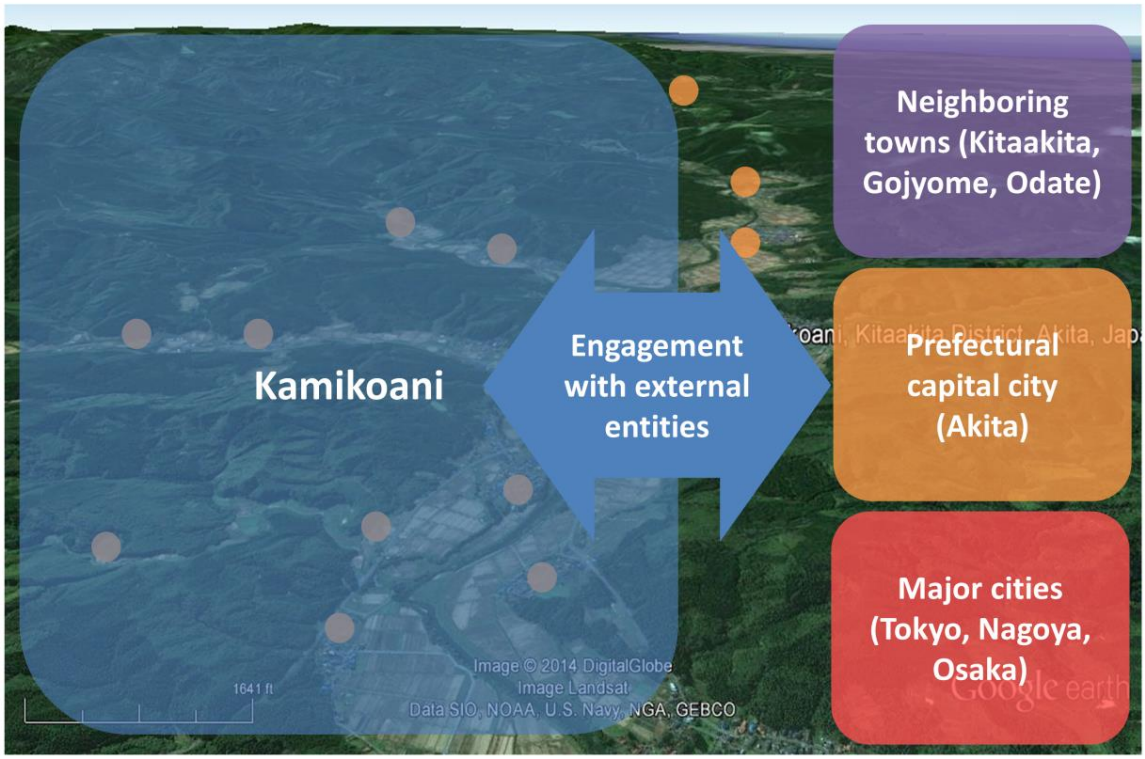

Figure 48 Engagement with external entities (Source: Google earth, base map)

6.3.3. Current local initiatives in Kamikoani within the multifunctionality framework

As it was described in Chapter 4, there are three officers at the local government of Kamikoani who are specifically assigned for the regional revitalization initiatives in Kamikoani. Their current activities in the village can be described in two types of activities. The first type is to provide support on the daily living conditions in rural communities. Those members are living in different local communities and providing various support on transportation, the management of communal properties, and other daily chores within the communities they reside. It seems a quite positive situation for the villagers that there are three specially assigned members to provide various supports upon the residents' requests. This first type of their activity can be considered as welfare-based approach to secure the basic access to the residents' daily needs.

The second type of their activity is about regional revitalization through Kamikoani Project which is an art exhibition festival with a series of workshops during three months in summer. This initiative aims to explore new ways to attract visitors to the village and also to gain social vitality in the participating communities. Those three members have been working with the village government and a local art school in Akita city to organize this art project since its first time in 2012. This recent initiative of art festival is indicating a completely new direction for the village. Within the multifunctionanlity framework, this second type of their activity can be seen as the deagrarianized rural system transition as this project is expecting economic effects from the visitors, yet the challenge for the village is to find a way to create a structured way to link the activities in this art festival with productive economic activities. So far the design of this festival is largely done by the village government and the local art school. Although the main contribution of local residents as volunteers is critical for the project, the involvement of local residents is quite limited. At this moment, being a volunteer is the only way to join the project on the organizing side. Therefore, it is difficult for the local residents to consider this event as a possible instrument to lead the village to the new direction.

Those findings from the second fieldwork of this research suggest that those community projects focus on the local or social concerns. By this way, it becomes easier for the leaders of the core members of projects to convince other residents to participate in the project. An art project is an entirely new idea for the villagers, hence another process to present the link between the current state of the village and the possible positive outcomes of the project for the villagers. In this respect, their first type of activity, providing support to communities, would be easier to gain understanding and actual support to their activities through volunteering.

Another important point drawn from the second fieldwork to the current operation of Kamikoani Project is about its finance. The budget for this art project is entirely covered by the prefectual government and local government. This suggests that the starting point of the project and funding scheme are entirely different between Japan and the UK. In the case

of community projects in the UK which are externally funded, the local residents first formed a residents' group, then conduct a demand survey, and applied for funding to start up their initiatives. Later, they needed to be self-sustaining both in their operation, including volunteer management and their finance.

Although the way Kamikoani Project started is different from community-based projects in the UK, its finance is a critical issue not only to continue their initiatives but also to aim for other future pathways for the entire village. For those community-based projects in the UK, being self-sustianing has a great effect for the local residents project members when they consider the future operation of their services to the local communities. Such appraoch is critically important since the types of services they offer are directly supporitng the well-being of residents by offering the services and also a common space where residents can communicate with each other. In this respct, the financial sustainability of their projects has much greater impact to the local community by ensuing the long-term operation of their projects. In other words, by achieving a self-sustaining project, these community-based projects can provide a sense of security and community to local residents. Ultimately, these community-based projects are forming a new internal institution of residents to respond to the local challneges in their community. The current operation of Kamikoani Project has a potential to make the local residents feel the sense of community as it offers the opportunities to particiapte as volunteers. This sense of community is vitally important for the village as it could set a foudnation for the internal redifinition of system units and also to increase the engage with external entities as prosed by this research. Also, this art festival contributes to create a common space for the local residents to interact with each other and also to form residents' own institution to cope with the local challenges. Once Kamiokani Project can be a self-sustianing project, there will be a greater chance for the local residents to form such residents' group to tackle various local challnges.

6.4. Academic contributions and limitations

6.4.1. Rapidly aging societies

The first academic contribution of this dissertation is that this study situates the issue of rural declines in Japan within the context of global aging. Population aging is a global phenomenon that affects the preconditions for the current social systems that are built upon the growth based models. In coming decades, the influence of aging population needs to be examined at every aspect of our societies. Europe and Japan are two areas where aging of societies occurred prior to other regions, yet the types of aging society they have been experiencing are considerably different. It is slow aging for the European society that took about 50 to 100 years, whereas it is rapid aging for the Japanese society that happened at a about two to four times faster pace. Rural declines and marginalization of rural communities are issue specific to Japan at this moment, yet this study situates this social phenomenon as part of much broader and rapidly aging society. This perspective will be critical as many of Asian counties are projected to experience at even faster speeds of population aging in the coming decades. As their societies are going through aging of local societies, similar patterns of rural declines are likely to occur. Such state of rural areas may be underestimated behind the rapid economic growth of the countries and emerging social issues in cities. Behind the rapid urbanization of the world, aging of rural societies may not be well examined. This study aimed to structure the issue of aging societies in the rural contexts and provided an empirical study of rural marginalization through its fieldwork.

6.4.2. Capturing community marginalization within the multifunctionality framework

The second contribution of this study is on the integration of community marginalization within a larger conceptual framework of rural transition, by employing a multifunctionality framework. These two frameworks were developed separately and in different regional contexts. The idea of community marginalization was raised by Japanese scholars in rural studies to illustrate the declining system quality of rural communities. The discourse of multifunctionality has emerged from agriculture and rural development policy

schemes largely in Europe based on the conceptual evolution of productivist to post-productivist and sustainable development paradigms. The systematic view of multifunctionality framework was found also applicable to the past transition of rural Japan and such changes have been induced by wider social changes. These points can be well explained in this framework. Additionally, the idea of community marginalization could also be placed as the fourth possible pathway for the future system transition. This study contributed to the development of the multifunctionality framework and also used the framework as a tool to examine reference cases from the fieldwork in the UK and also to discuss possible directions for the site of its first fieldwork, Kamikoani village in Akita, Japan.

By the application of the multifunctionality framework that can capture the rural transition, this study brought the findings from two fieldworks to a system scale discussion. This perspective is considered important in order to discuss aging and depopulation issues of rural areas through a phenomenological analysis.

6.4.3. Empirical study applying the framework of community marginalization

The third contribution of this study is on the conduct of an empirical study about the process of community marginalization, especially by applying a developed framework in the form of complete survey to one village. By this approach this study provides a set of primary data about the current state of all 20 communities in Kamikoani. There is also interview data from the community leaders and residents' groups about the current state of local activities and operations. By conducting the same set of survey in the village on a regular basis in the future, it will be possible to trace the actual changes in the quality of community functions at each community. The collected data through this type of field survey will be an initial set of data for further investigation of the community marginalization phenomenon in Kamikoani.

6.5. Limitations

The first limitation of this study is about the questionnaire survey conducted in the first fieldwork. Since this questionnaire was conducted to households, the collected data are not reflecting the idea of individual residents of communities. As the population size of a community becomes smaller, the states of individual residents are considered to be more influential to the overall state of rural communities. Although it would be extremely difficult to collect data of individual residents at a village scale through a questionnaire survey, if such data could be collected, the analysis on those communities, particularly those in the latter part of the community marginalization process, could be examined in more detail. For such a detailed survey, a longer term of field survey with participatory approach would be effective.

The second limitation of this study is about the coverage of community-based projects in the UK. Those findings from this fieldwork are capturing the common characteristics and current challenges of the projects fairly through the qualitative coding methods, and they are considered rigid findings as a reference case to elaborate discussions with the case of Kamikoani within the multifunctionality framework. However, this second fieldwork of this study could also be conducted with either increased number of projects to gain more generalized characteristics of community projects across different kinds of projects, or decreased to conduct mode detailed analysis through action research method.

For the purpose of this research, those cases from the UK were chosen for the following four reasons. The first reason is that the community-based projects both in urban and rural areas are well supported by the established supporting organizations in the UK. They have established structured ways to provide consultations and guidance to those communities that aim to organize their own initiatives. This point has made the community-based approach robust in the country. This research aimed to extract the key attributes and the challenges in their operations from the country's experience. The second reason is that the type of themes those community-based projects in the UK address seem to be appropriate the current state of rural areas in Japan. Owing to the depopulation and

aging of the residents, the marginalization phenomenon has been evident at the community scale in rural areas of Japan. In response to such functional declines at the local scale, it is considered to be more adequate to organize the community-based initiatives to address the needs of local residents rather than setting economic revitalization as the main objectives of the projects. Those community projects in the UK commonly set their main objective to establish the locally-based system and emphasize the economic viability of the projects as a mean to sustain their operations. The third reason is that the rural areas of the UK also have a long history in facing the challenges of the outmigration of young population and aging of remained residents in the countryside. Although the nationwide the degrees of these demographic changes are not as drastic as the case of Japan, their earlier experience created an accumulation of the academic researches on the related topics. Additionally, those recent studies on the community regeneration or regional revitalization initiatives in Japan have covered those successful practices in the country. In order to bring new perspectives on the community-based approaches, this research examined those established cases from the UK.

6.6. Future topics

In order to further capture the details of the process of community marginalization, it will be effective to conduct the same set of surveys in other town and village scale municipalities. It would also be effective to conduct longitudinal survey in the same locations; however, it may not be quick enough to bring out practical approaches to the marginalization at the community scale as well as the municipality scale. In order to minimize the possible misinterpretations of the results and local contexts, it would be more effective to conduct these surveys within the same prefecture. At the same time, the comprehensive evaluation of local initiatives needs to be conducted jointly with the survey. For the analysis of the collected data, the developed set of framework in this dissertation can be utilized.

In coming decades, Asia countries will go through a rapid aging of their societies. It would be extremely important to examine the types of social changes that this region experiences. The challenge of aging in urban areas and rural areas would differ

significantly as the challenge will more concentrate on the care and social inclusion issues under the continuous development and urbanizing society in urban settings. Conversely, the challenges would appear in local resource management in line with succession issues in each household and also issue of basic access and service issues in rural areas. Regarding the local resource management, there will be a strong link between aging of rural societies and the impacts of climate change. About these changes that rural areas are going through, it would be possible to share the knowledge about rural transformation that rural areas of Japan experienced with those Asian countries.

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APPENDIX

≪生活環境アンケート調査票≫

①世帯には何人の方がお住まいですか？年代と人数を教えてください。

0～9 歳	10～19 歳	20～29 歳	30～39 歳	40～49 歳
人	人	人	人	人
50～59 歳	60～64 歳	65～74 歳	75 歳以上	世帯合計
人	人	人	人	人

②現在世帯に就労されている方は何名いらっしゃいますか？　（　　）名

＊就労されている方がいらっしゃらない場合　→　質問④へ進んで下さい。

③就労されている方の勤務地はどちらですか？あてはまるものすべてに○をお付けください。

１．上小阿仁村内　　２．北秋田市（鷹巣）　　３．北秋田市（阿仁）
４．北秋田市（合川）　　５．大館市　　６．能代市　　７．五城目町
８．井川町　　９．潟上市　　１０．秋田市
１１．その他（市町村名：　　）

④世帯の主な交通手段について、最もあてはまるもの１つに○をお付け下さい。

１．徒歩・自転車　　２．自動車（世帯内で運転）　　３．自動車（ご近所で相乗り）
４．路線バス　　５．タクシー　　６．市町村有償運送（こあに号）
７．ＮＰＯ移送サービス協会　　８．その他（　　）

⑤食料品等の買物はどのようにされていますか？最もあてはまるもの１つに○をお付け下さい。

１．自分（世帯内）で出かける　　２．移動販売を利用している　　３．宅配サービスを利用する
４．転出した家族がしてきてくれる　　５．ご近所の人に連れて行ってもらう
６．その他（　　）

⑥食料品等の買物の頻度はどのくらいですか？最もあてはまるもの１つに○をお付け下さい。

１．ほぼ毎日　　２．週に２～３回　　３．月に２～３回　　４．ほとんどでかけない
５．その他（　　）

⑦冬期間の除雪・雪下し作業はどのようにされていますか？最もあてはまるもの１つに○をお付け下さい。

１．自分（世帯内）でしている
２．ご近所の方に手伝ってもらうことがある（無償）
３．ご近所の方に手伝ってもらうことがある（有償）
４．転出した家族に手伝ってもらうことがある
５．業者にお願いすることがある
６．自分（世帯内）ではできず，そのままにしてしまうことが多い
７．その他（　　）

⑧世帯で農業を行っていますか？最もあてはまるもの１つに○をつけてください。

１．専業農家 ２．兼業農家 ３．転出した家族が耕作している ４．親戚に耕作をお願いしている ５．それ以外の人に耕作をお願いしている ６．自分で世帯で消費する程度の畑（野菜づくり）をやっている ７．農業は行っていない ８．その他（　　）

⑨現在、集落外にお住まいのご家族はいらっしゃいますか？

- はい　　→　　質問⑩へ進んで下さい。
- いいえ　　→　　次ページの質問⑭へ進んで下さい。

⑩集落外にお住まいのご家族はどちらにいらっしゃいますか？あてはまるものすべてに○をお付け下さい。「県外・その他」の場合は、市町村名をご記入下さい。

１．上小阿仁村内　　２．北秋田市（鷹巣）　　３．北秋田市（阿仁）　４．北秋田市（合川） ５．大館市　　６．能代市　　７．五城目町　　８．井川町　　９．潟上市　　１０．秋田市 １１．県外・その他（市町村名：　　）

⑪集落外にお住まいのご家族はどのくらいの頻度で集落に来ますか？最もあてはまるもの１つに○をお付け下さい。

１．ほぼ毎日　　２．週に１～２回ほど　　３．月に１～２回ほど ４．農繁期や，その他の作業があるとき　　５．年に数回・お盆やお正月等の行事のとき ６．ほとんど来ない　　７．その他（　　）

⑫集落外にお住まいのご家族が訪ねてくるときは、どのように時間を過ごされていますか？最もあてはまるもの１つに○をお付け下さい。

１．食料品などの買物をしてきてくれる　　２．買物やその他の用事に連れて行ってくれる ３．家事や身の回りの世話をしてくれる　　４．道路の草刈りや水路の管理などを手伝ってくれる ５．農作業を手伝ってくれる　　６．作業などは特にないが，行事のときに集まる ７．その他（　　）

⑬現在、集落外にお住まいのご家族は将来的に集落に戻ってくると思いますか？最もあてはまるもの１つに○をお付け下さい。

１．５年以内に戻ってくる予定　　２．１０年以内に戻ってくる予定 ３．いずれは戻ってくる予定　　４．仕事の関係上，戻ってくるのは難しいと思う ５．持家があり戻ってくるのは難しいと思う　　６．完全には戻らないが定期的に通ってくると思う ７．わからない・話し合っていない ８．その他（　　）

⑭世帯で何か困りごとがあったときには、どなたに相談されますか？最もあてはまるもの１つに○をお付け下さい。

１．ご近所の方や自治会長に相談する　　２．親戚に相談する　　３．転出した家族に相談する
４．役場に相談する　　５．福祉センター・ヘルパーさんに相談する　　６．特に相談することはしない
７．その他（　　）

⑮現在の世帯収入は生活していくのに十分ですか？最もあてはまるもの１つに○をお付け下さい。

１．十分である　　２．十分だがパート程度の収入があるとよい
３．どちらともいえないが生活していくのには困らない
４．不十分なのでパート程度の収入があるとよい　　５．不十分なのでフルタイムの仕事が必要である
６．その他（　　）

⑯お住まいの集落のなかでの作業で、人手不足を感じることはありますか？あてはまるものすべてに○をお付け下さい。

１．農作業　　２．除雪作業　３．荷物運びなどの軽作業
４．地域清掃　　５．神社や集会所などの維持管理　　６．集落の行事
７．その他（　　）

⑰お住まいの地域での生活環境についてどのように感じていますか？以下の項目について、あなたの感じ方に最もちかいものを，「１．とてもそう思う」、「２．そう思う」、「３．どちらとも言えない」、「４．そう思わない」、「５．まったくそう思わない」の中から１つ選び，○をお付け下さい。

	とてもそう思う	そう思う	どちらとも言えない	そう思わない	まったくそう思わない
ア．上下水道の整備が良い	1	2	3	4	5
イ．道路などの環境整備が良い	1	2	3	4	5
ウ．バスや公共交通が十分にある	1	2	3	4	5
エ．通勤・通学の便が良い	1	2	3	4	5
オ．買物をするところが十分にある	1	2	3	4	5
カ．病院などの医療施設が十分にある	1	2	3	4	5
キ．介護・福祉施設が十分にある	1	2	3	4	5
ク．子どもの教育環境が十分に整っている	1	2	3	4	5
ケ．地域に雇用が十分にある	1	2	3	4	5
コ．自然環境が良い	1	2	3	4	5
サ．住み心地が良い	1	2	3	4	5
シ．地域内にまとまりがある	1	2	3	4	5
ス．住んでいる人の気質や人情が良い	1	2	3	4	5
セ．地域活動や集会に参加するのが楽しい	1	2	3	4	5
ソ．祭や地域行事が盛んである	1	2	3	4	5
タ．人付き合いに気を使う	1	2	3	4	5
チ．後継者・若者が十分いる	1	2	3	4	5
ツ．特に不安に感じていることはない	1	2	3	4	5

⑱今後の地域での取り組みとして、何か実現したいと考えていることはありますか？あてはまるものすべてに〇をお付け下さい。

1．「道の駅かみこあに」を盛り上げていきたい
2．豊かな自然を使って観光客や修学旅行などを受け入れてみたい
3．休耕地を利用する活動をしてみたい
4．集落のお祭りや芸能に関する活動がしたい
5．村の人たちが気軽に集まれる場所があるといい
6．今のままがいい・特にない
7．その他（　　）

⑲今後もお住まいの地域に住み続けたいと思いますか？

- はい　→　質問⑳-1 に進んで下さい。
- いいえ　→　質問⑳-2 に進んで下さい。
- わからない　→　質問㉑に進んで下さい。

⑳-1「はい」と答えた理由として，最もあてはまる番号１つにに〇をお付け下さい。

1．自然が豊かだから
2．自分が生まれたところで愛着があるから
3．家族と住んでいるから，親族が近くに住んでいるから
4．家屋や農地があるから
5．転出してもいいと思うが，集落外で生活する当てがないから
6．その他（　　）

⑳-2「いいえ」と答えた理由として，最もあてはまる番号１つに〇をお付け下さい。

1．買物や通院など生活するのに不便だから
2．集落の雰囲気が合わないから
3．一人暮らしでいろいろと不安だから・将来的に一人暮らしになってしまうから
4．集落外に住む親類と一緒に住みたいから
5．病気など体調に不安があるから
6．経済的な理由
7．家屋や農地の維持管理ができなくなるから
8．除雪など冬期間の生活が不安だから
9．その他（　　）

㉑地域の今後のあり方や，またはこの調査に対するご意見等ございましたら，ご自由にお書き下さい．
また，このような調査に際して聞き取り調査等にご協力頂ける方は，氏名と連絡先をご記入下さい．

ご協力ありがとうございました。