Do Japanese Citizens Move to Rural Areas Seeking a Slower Life? Differences between Rural and Urban Areas in Subjective Well-Being

Hiroki SASAKI

Food and Agriculture Organization of the United Nations (FAO), Roma, Italy
Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries, Tokyo, Japan

hiroki.sasaki@fao.org

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Summary

For some time, individuals in multiple contexts have been moving from rural to urban areas for economic reasons. In recent years, however, young people in Japan have been increasingly turning to rural areas to embrace a slower, less-hectic lifestyle. Despite this interesting development, researchers have thus far failed to identify determinants of residents' well-being in rural and urban areas in Japan. Moreover, recent empirical work has shown that stated happiness or subjective well-being (SWB) can serve as an empirical proxy for perceived utility. To expand upon this line of research, in this paper, I use SWB to gauge disparities between the Japanese rural and urban environments. In addition, I determine how natural capital and social capital affect SWB for both rural and urban residents. Results show that on average, rural residents report higher SWB than urban residents despite low average income. I also identify multiple factors other than household income that affect SWB; these relationships are particularly pronounced for rural residents. Finally, results demonstrate that residents that migrate from urban to rural areas reported high levels of SWB. Taken together, the results of this study provide new insight into rural values and the attractiveness of rural residency.

Keywords: happiness, subjective well-being, Natural Capital and Social Capital

JEL Classification codes: I31, D63, Q15

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1. INTRODUCTION

Japan is one of the first countries in the world to face problems associated with depopulation. The "Masuda Report" (Masuda 2014) generated significant interest throughout Japan with its prediction that nearly half of all Japanese municipalities may disappear due to population decline and the inability to maintain administrative functions. Because the municipalities at risk for disappearance are mostly located in rural areas, the need to cope with rural community issues has come to the fore for policy makers.

Contrary to the findings of the Masuda Report, a recent opinion poll showed that a growing number of young Japanese urbanites wish to settle in rural areas (Cabinet Office 2014), indicating a general interest among Japanese citizens to embrace a rural lifestyle. This interest in rural living was not always pervasive. In the 1980s, Tokyo served as the center of the Japanese population, causing overconcentration there. In turn, the concentration of urban functions in Tokyo resulted in substantial income disparity between citizens in urban and rural areas.

Despite the economic benefits of living in an urban area, a growing number of people have begun to leave cities in search of better lives in rural areas. To illustrate, the aforementioned opinion poll showed that the proportion of Japanese citizens interested in living in rural areas increased from 21% in 2005 to 32% in 2014 (Cabinet Office 2014). This trend was particularly pronounced for young people. The return of young citizens to rural areas could revitalize these areas and improve Japanese agriculture on the whole. To date, the Cabinet Office has not performed an econometric analysis to determine which variables affect citizens' motivations for returning to rural areas. Still, the results of the survey suggest that increasing interest in rural residence among young citizens may be a result of shifting perceptions regarding that which makes living conditions attractive and changing values. Internationally, researchers and policymakers have widely accepted that food is the key product of agriculture, and there are other benefits of agriculture. Taken together, these benefits have come to describe "multifunctionality" of agriculture (Organization of Economic Co-operation and Development [OECD] 2001, 2003).

Past research by agricultural economists on multifunctionality has largely focused on "visualizing value" in monetary terms through Stated Preference and Revealed Preference methods. These researchers have not sufficiently explored (a) which elements of rural areas contribute to well-being, or (b) how these variables are related. These questions are of utmost importance, given recent emphasis on the use of ecosystem services,[1]

[1] Ecosystem services can be classified into one of four main categories: provisioning services, regulating services, habitat services, and cultural services. Provisioning services relate to products obtained from ecosystems, including food, fresh water, wood, fiber, genetic resources, and medicines. Regulating services are defined as the benefits obtained from the regulation of ecosystem processes. These include climate regulation, natural hazard regulation,

which relate to the association between ecosystems and well-being (TEEB D0). In short, ecosystem services directly or indirectly support our quality of life.

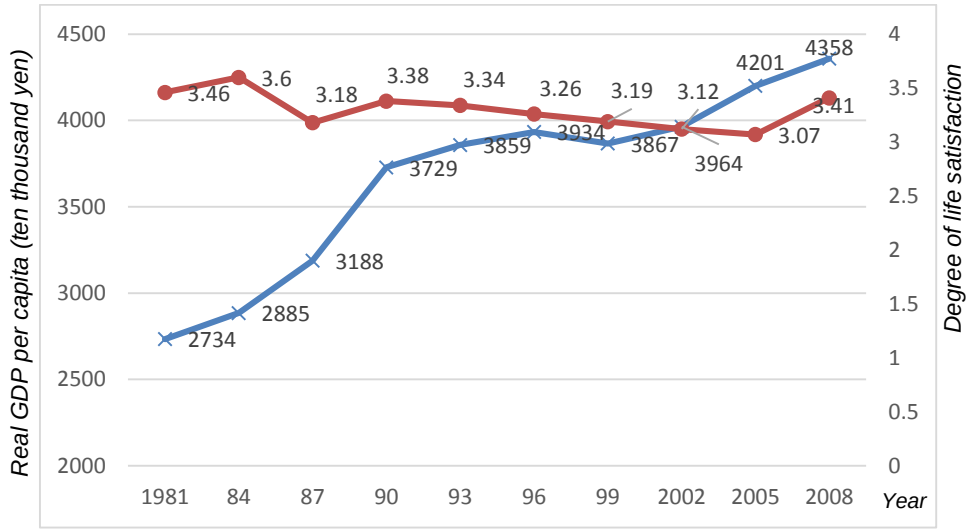
In the last decade, the economic literature has experienced the emergence of a new research agenda that uses subjective questions to measure individual well-being. Some of this work has provided support for a link between factors related to the regional environment (e.g., air quality, green space) and well-being. Given the emergence of this link, the purpose of this paper is to use subjective measures to compare urban and rural residence in terms of well-being. In doing so, I will show how rural characteristics affect subjective well-being (SWB), which may influence Japanese citizens' motivations for migrating from urban to rural areas. As an empirical indicator of utility, happiness data permit comparison of urban and rural areas to a degree greater than traditional economic indicators (e.g. GDP).

To address the issues outlined above, the remainder of the article is organized in a series of interrelated sections. Section 2 features a review of research on SWB, with a particular emphasis on differences between rural and urban areas. In Section 3, I describe the data and empirical model used to test these differences. Following this, I report the results of the econometric analysis in Section 4. Finally, in Section 5 I discuss the limitations of the analysis and offer some concluding remarks.

2. SWB RESEARCH: RURAL VS. URBAN AREAS

The Easterlin paradox is a key concept in happiness economics. Related to the relationship between economic variables and well-being, Easterlin (1974) showed that within developed nations, reported happiness was not significantly associated with per capita GDP. This paradox has recently manifested in Japan, where survey data has shown that happiness levels have not risen in parallel with increases in income (Cabinet Office 2008, Figure 1). In short, these data show that economic wealth does not necessarily determine the degree to which one is satisfied with his/her life.

Figure 1: Japanese real GDP per capita and the Degree of Life Satisfaction



(Source Cabinet Office 2008)

water purification and waste management, pollination, and pest control. Habitat services emphasize the importance of ecosystems to provide habitats for migratory species and to maintain the viability of gene-pools. Cultural services include non-material benefits that people obtain from ecosystems, including spiritual enrichment, intellectual development, recreation, and aesthetic enjoyment.

（Notes）

1. Compiled from the Cabinet Office "National Survey on Lifestyle Preferences", "Annual Report on National Accounts" (Data before 1993 is compiled from 2002 report and data after 1996 is compiled from 2006 report), and the Ministry of Internal Affairs and Communication "Population Statistics"

2. "Degree of Satisfaction" is calculated as follows: The question, "Are you satisfied with life or not?" was answered in five scales from "Satisfied" to "Unsatisfied". The weighted average of each answer was indexed into "Degree of Satisfaction".

3. The respondents represent both sexes from the age of 15 to 75. (Excludes "do not know" and "no answer")

Happiness research based on self-reports of life satisfaction have made significant contributions to our understanding of how people conceptualize well-being beyond their consumption habits. In addition, the growing literature on SWB has thus far focused on degree and determinants of happiness. This is useful in a variety of fields that inform policy (Bock, 2011).

Despite the growing literature on SWB and happiness, studies that focus on rural areas and agriculture and their respective relations to SWB are scarce. In one of the rare studies to explore these associations, Baaske et al. (2009) surveyed 18,000 citizens in 60 municipalities to show a close relationship between farming performance and perceived quality of life. This finding reiterates that agriculture is one of the most significant predictors of quality of life within a municipality.

In another example, a team of researchers from the University of Évora and Cardiff University have been conducting a survey in rural Portugal to measure SWB. These researchers surveyed local farmers and other community members using a place-based approach. To consider causality between SWB and agriculture, the researchers plan to add specific questions on agriculture to general ones about SWB (Surove et al. 2012). In addition, although multiple researchers have measured SWB in rural areas of developing countries (e.g., Markussen et al. 2014 in Vietnam, Dedehouanou et al. 2011 in Senegal, Guillén et al. 2006 in Thailand), none of these studies have compared rural areas with urban areas in terms of SWB.

In a similar line of research, Tsutsui et al. (2009) compared large Japanese cities (the 13 largest in Japan), medium-sized cities (>100,000 residents), and other cities/towns/villages in terms of SWB. Their results show that on average, the size of the city positively corresponded to respondents' reported SWB. This finding is not consistent across all studies, however. For example, Hellevik (2003) found no significant difference between rural and urban residents in Norway with respect to reported SWB.

All studies that have evaluated differences in SWB between rural and urban residents delineated respondents contingent on the province or prefecture in which they lived. Despite the convenience this method offers, classification on the basis of administrative boundaries may not highlight how rural and urban areas differ in terms of how they moderate the relationships between multifunctionality conservation, social capital, and migration on SWB. Given the specificity of the SWB construct, greater nuance with respect to respondents' locations may reveal significant effects on SWB that would otherwise remain hidden. This is especially true in Japan, where capturing one's residential environment is difficult using any standard means due to Japan's geographic diversity.

Given the shortcomings of past research, this paper offers two key contributions to the literature. First, it features a comparison of rural and urban residents' SWB using "subjective" classifications of urban and rural areas. Specifically, respondents are classified as rural or urban based on their own self-reports.

Second, this classification protocol will allow for the identification of rural characteristics and individual experiences that affect SWB. The recent movement in Japan for residents to return to rural areas is affected by the multifunctional value of rural land, but no researchers have attempted to identify variables that

affect rural and urban residents. The increased understanding that will derive from this analysis can potentially contribute to rural-development policy planning.

3. EMPIRICAL APPLICATION

3.1 Econometric model

Consistent with most extant studies in this domain, in this paper, SWB is operationalized with participants' responses to the following question: "How dissatisfied or satisfied are you with your life overall?" Responses to this question were posed as an 11-point Likert scale ranging from 0 (not at all satisfied) to 10 (completely satisfied).

The first step in this life-satisfaction approach is to estimate a micro-econometric SWB model in which SWB is estimated a function of socio-economic and demographic variables, factors related to natural and social capital, and other control variables. The model takes the form of an indirect utility function for individual *i* in location *k*:

$$SWB_{i,k} = \beta_0 + \beta_1 ln(y_{i,k}) + \beta_2 x_{i,k} + \beta_3 a_{i,k} \quad i = 1 \dots I, k = 1 \dots K \tag{1}$$

In this model, $y_{i,k}$ represents household income, x is a vector of socio-economic and demographic characteristics including, age, marital status, employment, and health status, and a_{ik} depicts respondents' attitudes towards rural natural capital and social capital (Breton et al. 2008, Ambrey et al 2014).

For the purposes of this paper, I estimated Eq. (1) as an ordered probit model. As such, SWB is assumed to be a categorical variable, making it impossible to directly observe happiness levels. Instead, I could determine only the range of values in which respondents' happiness levels lie.

3.2 Data

The empirical model used in this study is guided by existing studies on SWB. Data for the model were collected in October of 2014 via an Internet survey in which I asked participants questions related to their perceptions of SWB, demographics, socio-economic factors, and personal attitudes. I administered this survey with the Policy Research Institute in the Ministry of Agriculture, Forestry and Fisheries in Japan through a consumer monitoring company with access to 2.3 million registered subjects. The survey platform randomly selected respondents based on the demographics of each prefecture by ensuring the population, sex, and age ratios of participants reflected those of Japan as a whole. In total, 1,500 Japanese participants aged 20 to 64 provided data. To collect data concerning SWB, the survey included a question asking individuals "How dissatisfied or satisfied are you with your life overall?" Responses to this question were made via an 11-point Likert scale ranging from 0 (very dissatisfied) to 10 (very satisfied). Table 1 provides summary statistics for all explanatory variables used in the estimation. Explanations of all explanatory variables in the empirical model are offered in the following paragraphs.

Socio-economic Characteristics

Socio-economic variables in the model include household income, age, children, gender, marital status, health status, income, assets, relative income, future prospects, and economic preferences. I selected these

variables on the basis of past research on SWB. The survey also included questions related to participants' places of residence; they were asked to indicate if they lived in a rural area, sub-rural area, suburban area, or urban area.

Attitudes and experiences: Natural capital and social capital

Respondents provided answers to questions meant to capture the respective determinants of SWB for rural and urban residents. These items relate to the conservation of natural capital and their perceptions of their living environment's social capital. The items concerning natural capital test participants' knowledge of and attitudes toward natural capital, as well as the frequency with which they engage in activities geared towards rural conservation. Questions related to social capital consist measure "frequency of respondents' participation in regional activities", "the number of trustable person in neighbor", "level of rural governance", and the "degree to which reciprocity is a norm" in their region of residence, which questions are selected based on an analysis in the past policy report focusing on social capital in rural area (Japanese Ministry of Agriculture, Forestry and Fisheries [MAFF] 2007).

Migration from urban to rural areas

In Japan, a "U turn" refers to the migration of people who return to their hometowns to settle down and earn a living after working or studying in cities. In contrast, the "I-turn" refers to unidirectional movement out of urban areas. One final migration pattern is called the "J-turn", wherein a person leaves the city to move to a rural area other than his/her birthplace. The questionnaire included a question related to the type of migration participants engaged in. This variable was operationalized as a control variable, as migration type may exert an effect on SWB.

Preference Parameters

Items related to respondents' "rate of time preference", "risk aversion", and "altruism" were also incorporated into the model as controls. I included these variables because respondents' happiness may relate to these preference parameters (Tsutsui, Ohtake and Ikeda, 2009).

Objective indicators

In addition to the subjective data gleaned via the above questions, I also included a number of objective measures as predictors in the model. First, I included the Satoyama Index (SI) in the model to indicate the 100 square kilometer area (10km x 10km) in which a resident resides. SI was included because it can serve as a proxy designed to capture the richness of different geographic regions, because "a high SI value is an indicator of high habitat diversity, which is characteristic of traditional agricultural systems, including Japanese Satoyama landscapes, while a low value indicates a monotonic habitat condition typical of extensive monoculture landscapes" (pp.20, Kadoya and Washitani 2011). Second, I included a predictor in the model that reflects the rate at which the population in certain regions decrease due to an outflow of young women. Because aging and decreasing fertility rates are serious problems in Japan, their salience can affect SWB. As

long as the population of young females is in decline, the capacity for the Japanese population to replenish itself declines in parallel (Masuda 2014).

Table 1. Definition of Variables and Descriptive Statistics

Variable	Definition	Mean	Max	Min	Std. Dev	Observation
SWB	Reported current life satisfaction (happiness) by integers from 0 to 10. Based on the following survey question; "Overall, how happy are you these days?" The respondent is to choose from a scale of 0 to 10, where 0 is "very unhappy", 5 "neither happy nor unhappy" and 10 is "very happy"	5.823	10	0	2.230	1500
Male	Dummy variable=1 if respondent is male	0.501	1	0	0.500	1500
Age	Age of respondents in year	43.147	64	20	12.508	1500
Age squared/100	Age of respondents in year squared/100	20.180	40.96	4	10.843	1500
Employed	Dummy variable=1 if respondent is employed	0.647	1	0	0.478	1500
Unemployed/seeking	Dummy variable=1 if respondent is currently unemployed and seeking job	0.066	1	0	0.248	1500
Student/Housework	Dummy variable=1 if respondent performs home duties or students	0.219	1	0	0.413	1500
Married	Dummy variable=1 if respondent is legally married	0.590	1	0	0.492	1500
Separated/divorced	Dummy variable=1 if respondent is separated or divorced	0.060	1	0	0.238	1500
Children	Dummy variable=1 if respondent has children	0.506	1	0	0.500	1500
Very good health	Dummy variable=1 if respondent's health condition is very good	0.108	1	0	0.310	1500
Good health	Dummy variable=1 if respondent's health condition is good	0.624	1	0	0.485	1500
Ln(income)	Natural log of household income	6.137	7.65	3.91	0.770	1246
Ln(asset)	Natural log of household asset	6.956	9.90	4.83	1.474	861
Relative income	Dummy variable=1 if respondent thinks their income is higher than neighborhood	0.341	1	0	0.474	1500
Citizen in urban	Dummy variable=1 if respondent is considered to reside in urban area based on respondent's subjective view	0.287	1	0	0.452	1500
Citizen in mid-urban	Dummy variable=1 if respondent is considered to reside in relatively urban area based on respondent's subjective view	0.402	1	0	0.490	1500

Citizen in mid-rural	Dummy variable=1 if respondent is considered to reside in relatively urban area based on respondent's subjective view	0.216	1	0	0.412	1500
Citizen in rural	Dummy variable=1 if respondent is considered to reside in rural area based on respondent's subjective view	0.079	1	0	0.270	1500
Rural residential experience	Dummy variable=1 if respondent have experience of resident in rural area (only for urban residents)	0.255	1	0	0.436	1033
I turn	Dummy variable =1 if respondent experienced urban-to-rural migration	0.033	1	0	0.178	1500
U turn	Dummy variable =1 if respondent experienced returning to the countryside in home town	0.097	1	0	0.297	1500
J turn	Dummy variable =1 if respondent experienced returning to the countryside other than home town	0.035	1	0	0.185	1500
MF attitudes	Degree of attitudes toward conservation of agriculture's multifunctionalituy (summation of answer for each 8 types of elements of multifunctionality from 3:very much to 0: not at all)	17.971	24	0	4.527	1500
Farmer	Dummy variable=1 if respondents are farmer	0.062	1	0	0.241	1500
Farmland	Dummy variable=1 if respondent resides with farmland in15min by walk	0.611	1	0	0.488	1500
Direct rural activity	Degree of frequency to participate direct activities for rural conservation(summation of answer for each 7 types of activities from 3:frequent to 0 not at all)	1.723	21	0	2.929	1500
Indirect rural activity	Degree of frequency to participate indirect activities for rural conservation (summation of answer for each 6 types of activities from 3:frequent to 0 not at all)	2.003	18	0	2.615	1500
Food/Agri perspective	Degree of expectation for food, agriculture and rural issues in coming 10 years (summarization of answers for each 7 type of policy issues from3:improve to 0)	7.968	21	0	3.618	1500
Neighbor friendliness	Degree of friendliness with people in the neighborhood（scale 0 to 3）	1.239	3	0	0.788	1500
Attendance regional activities	Degree of participation to regional activities(scale 0 to 3)	0.431	3	0	0.645	1500
Trust person	Number of trustable person (scale 0 to 3)	0.876	3	0	0.739	1500

Gov. trust	Degree of government trust（scale 0 to 3 ）	0.795	3	0	0.762	1500
Norms of reciprocity	Degree of norms of reciprocity	0.269	1	0	0.443	1500
Shock	Degree of frequency of experienced shocking events in past five years (scale 0 to 4)	1.145	4	0	1.284	1500
Time discount	Degree of time discount rate (%) based on the answer to the survey question	13.219	50	-5	17.011	1431
Risk aversion1	Degree of risk aversion based on the answer to the following survey question (scale 0 to10)	5.761	10	0	2.298	1500
Risk aversion2	Degree of risk aversion based on Holt and Laury (HL)'s measure of risk aversion (scale 0 to 10) (Holt and Laury, 2002)	4.934	10	0	3.114	1371
Altruism	Degree of risk aversion based on the answer to the survey question (scale 1 to 3)	2.083	3	1	0.854	1500
Satoyama	Degree of Satoyama Index (SI) of respondent's resident area (10km×10km). "A high SI value is an indicator of high habitat diversity, which is characteristic of traditional agricultural systems, including Japanese satoyama landscapes, while a low value indicates a monotonic habitat condition typical of extensive monoculture landscapes" (Kadoya and Washitani, 2011).	0.238	0.592	0.003	0.123	1500
Population decrease	Dummy variable=1 if population of young women (aged 20 to 39) of the respondent's municipalities is estimated to decrease to less than half of the current level in 30-years' time (National Institute of Population and Social Security Research Tokyo, Japan)	0.052	1	0	0.222	1500

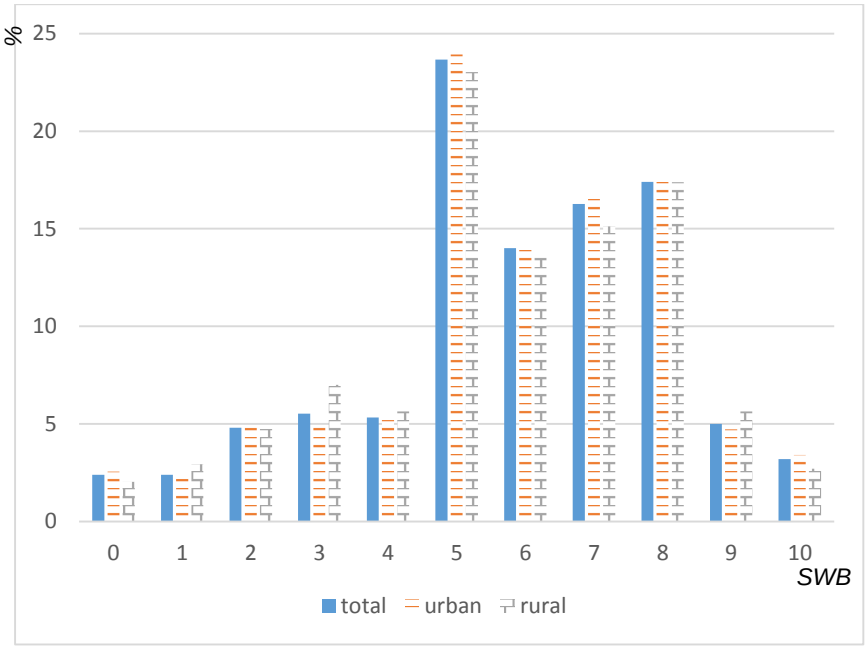
4 RESULTS

4.1 Estimation results: Current SWB

The largest portion of the entire sample indicated that they were neither happy nor unhappy (5 on the Likert scale), followed closely by a slight leaning towards happiness (7 and 8 on the Likert scale; see Figure 2). The result is consistent with previous survey data provided by Japanese citizens (Cabinet Office 2011). Most western European countries differ. Most respondents in Western Europe mark 8 on the Likert scale,

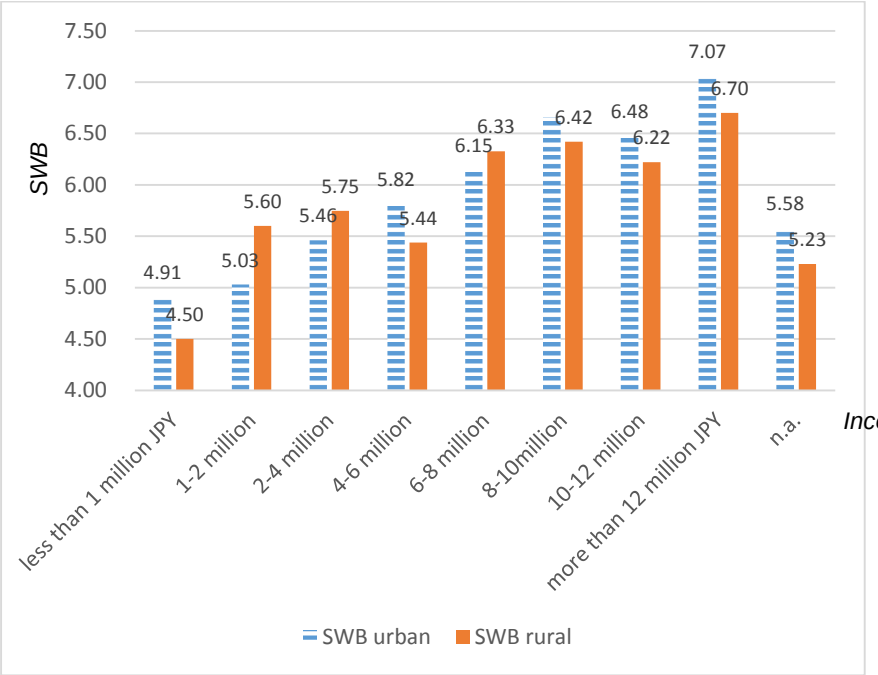
indicating slightly happier respondents. Although these differences between Japanese and European data are interesting, comparing SWB across nations should be done with caution and a consideration of cultural factors that may influence responses (Diener and Oishi 2004).

Figure 2. Distribution of SWB scores in comparison with urban and rural residents



Following our comparison of the overall sample, I then compared urban and rural respondents on the basis of their reported levels of happiness. Rural residents reported a slightly higher happiness level ($\mu = 6.04$) than their urban counterparts ($\mu = 5.82$), despite the latter having higher household income. However, this difference was not statistically significant. Results also reveal a positive relationship between income level and SWB for urban residents, but this correlation is weak for rural residents (see Figure 2). These findings suggest that income may be a contributor to SWB for urban residents, but rural residents seek out other factors for their SWB.

Figure 3. Distribution of Average SWB score in each income group



Consistent with past work on SWB, we developed an ordered logit regression model to examine how multiple factors influence SWB (see Table 2). Pseudo-R^2 values of 0.083 and 0.109 are comparable to previous studies (e.g., Ambery and Fleming, 2011), indicating an acceptable level of explanatory power for the model.

For some variables, significant differences between urban and rural residents emerged. For instance, the gender dummy variable is significant and negative only for urban residents, indicating that in general, urban males are unhappier than females. In addition, among rural residents, there was a significant parabolic (i.e., U-shaped) relationship between age and SWB. Although no clear results emerged on the relationship between family form and SWB, there was positive association between the number of children a family has and SWB among rural residents. There was also a positive relationship between good health and SWB for both residents. Finally, consistent with the correlational results reported above, I found that household income is significantly and positively related to SWB, but only for urban residents.

A number of previous researchers have indicated that the relationship between most variables and SWB diminishes with as income increases. The analyses presented in this study, however, indicate that this phenomenon applies only to urban rural residents. Interestingly, there was a positive correlation between *relative* income and SWB for both urban and rural residents. With respect to respondents' migration experiences, I found that respondents who moved to the suburbs via an "I-turn" tend to have higher SWB than their "U-turn" and "J-turn" counterparts.

The analyses also produced a number of notable findings concerning natural capital. First, urban residents with strong attitudes concerning conservation of the rural environment reported high levels of SWB. Similarly, urban residents with optimism towards future Japanese agriculture had high SWB, on average. Interestingly, there is no relationships between conservation attitudes and SEB among rural citizen. It can be understood that rural residents seem not to realize the value of natural capital in their own backyards. City residents within 15 minutes walking distance of farmland reported low SWB. This finding may be attributable to poor attitudes towards farmland management in urban areas. Issues related to social capital also seemed to

exert influence on SWB, as some of these factors (i.e., degree of friendliness with people in the neighborhood, number of trustable people) were positively associated with rural residents' SWB.

With respect to the preference-based predictors, risk averse individuals in both rural and urban environments reported high SWB, but the association between time discount rate and SWB was not observed.

Finally, the associations between the objective variables SWB produced cloudy results. For instance, there was no clear relationship between the Satoyama Index and SWB. The relationship between decreases in population and SWB is a positive one, but only for urban residents. This finding support the work of Glaeser et al. (2016) who found that residents of declining cities appear less happy than residents of other areas (e.g., the American Rust belt).

Table 2. Ordered Logit Model results with reported rural residents and urban residents (Dependent variable: current SWB)

	Urban Residents			Rural Residents		
Variable	Coefficient	P-value		Coefficient	P-value	
MALE	-0.193	0.028	**	0.216	0.123	
AGE	-0.013	0.592		-0.111	0.006	***
AGE_SQUARED_100	0.013	0.642		0.111	0.016	**
EMPLOYED	-0.002	0.989		0.209	0.424	
UNEMPLOYED_SEEKING	-0.356	0.123		-0.273	0.461	
STUDENT_HOUSEWORK	0.030	0.875		0.155	0.587	
MARRIED	0.497	0.000	***	0.336	0.109	
SEPARATED_DIVORCED	0.554	0.002	***	0.380	0.219	
CHILDREN	-0.169	0.107		0.474	0.012	**
VERY_GOOD_HEALTH	0.788	0.000	***	0.846	0.000	***
GOOD_HEALTH	0.447	0.000	***	0.329	0.018	**
LN_INCOME_	0.148	0.014	***	-0.009	0.919	
RELATIVE_INCOME	0.484	0.000	***	0.531	0.000	***
I_TURN	-0.386	0.137		0.880	0.001	***
U_TURN	-0.085	0.573		-0.028	0.865	
J_TURN	0.023	0.907		0.318	0.373	
MF_KNOWLEDGE	-0.001	0.989		0.181	0.233	
MF_ATTITUDES	0.024	0.014	**	0.011	0.447	
FARMER	0.107	0.613		-0.164	0.363	
FARMLAND	-0.178	0.025	**	-0.185	0.479	
RURAL_EXPERIENCE_DIRECT	-0.045	0.053		-0.010	0.698	

MF_EXPERIENCE_INDIRECT	0.016	0.455		-0.005	0.869	
FOOD_AG__PERSPECTIVE	0.033	0.003	***	0.009	0.594	
NEIGHBOR_FRIENDLINESS	0.047	0.492		0.248	0.009	***
ATTENDANCE_REGIONAL_ACT	-0.047	0.536		-0.081	0.471	
NO_TRUST_PERSON	0.029	0.662		0.269	0.006	***
GOV_TRUST	-0.035	0.521		0.020	0.805	
NORMS_OF_RECIPROCITY	0.291	0.001	***	0.295	0.039	**
SHOCK	-0.053	0.104		-0.140	0.006	***
TIME_DISCOUNT	-0.002	0.431		0.003	0.336	
RISK_AVERSION1	0.060	0.001	***	0.051	0.048	**
RISK_AVERSION2	-0.001	0.913		0.018	0.346	
ALTRUISM	0.041	0.379		-0.095	0.189	
SATOYAMA2	-0.068	0.829		-0.910	0.061	*
POP_DECREASE1	-0.498	0.011	**	0.169	0.428	
RURAL_RES_EXPERIENCE	0.113	0.231				
Pseudo R-squared	0.083			0.109		
Sample	768			337		

Note: Significance at the ten-percent level is indicated by*, significance at the five-percent level is indicated by ** and significance at the one-percent level is indicated by***.

4.2 Estimation results: Future SWB

In addition to identifying factors that influence current SWB, I also estimated an ordered logit regression model to predict future SWB. Although there were many similarities to the analysis of factors that affect current SWB, there was one key difference. Rural and urban respondents who were optimistic about future Japanese agriculture also reported high levels of SWB. In addition, and consistent with past work (i.e., Matushima 2013), participants' health was a significant predictor of future SWB.

There was a parabolic (U-shaped) between age and future SWB, but only for rural residents. This may be the result of widespread promotion of the "return-to-rural" movement and the elderly's desire to move somewhere peaceful for their final residence. The results of the analysis strongly suggest the latter, since the relationship between rural living and SWB was strongest among respondents in their 50s and 60s.

Table 3 Ordered Logit Model results with reported rural residents and urban residents (Dependent variable: future SWB)

	Urban Residents			Rural Residents		
Variable	Coefficient	P-value		Coefficient	P-value	
MALE	-0.124	0.161		-0.013	0.929	
AGE	-0.021	0.414		-0.140	0.001	***
AGE_SQUARED_100	0.003	0.926		0.129	0.005	***
EMPLOYED	-0.033	0.848		-0.096	0.715	
UNEMPLOYED_SEEKING	-0.295	0.204		-0.255	0.501	
STUDENT_HOUSEWORK	-0.214	0.261		-0.196	0.496	
MARRIED	0.501	0.000	***	0.214	0.312	
SEPARATED_DIVORCED	0.103	0.571		0.390	0.214	
CHILDREN	-0.116	0.274		0.259	0.174	
VERY_GOOD_HEALTH	0.688	0.000	***	0.611	0.008	***
GOOD_HEALTH	0.402	0.000	***	0.477	0.001	***
LN_INCOME_	-0.019	0.757		0.063	0.485	
RELATIVE_INCOME	0.096	0.282		0.139	0.313	
I_TURN	-0.272	0.299		0.243	0.350	
U_TURN	-0.091	0.546		0.022	0.897	
J_TURN	0.184	0.349		0.101	0.779	
MF_KNOWLEDGE	-0.074	0.420		-0.039	0.802	
MF_ATTITUDES	0.030	0.003	***	0.014	0.349	
FARMER	0.012	0.956		-0.025	0.890	
FARMLAND	-0.140	0.079	*	-0.122	0.645	
RURAL_EXPERIENCE_DIRECT	0.017	0.467		0.004	0.871	
MF_EXPERIENCE_INDIRECT	-0.041	0.050	**	-0.026	0.393	
FOOD_AG__PERSPECTIVE	0.042	0.000	***	0.084	0.000	***
NEIGHBOR_FRIENDLINESS	-0.091	0.191		0.108	0.263	
ATTENDANCE_REGIONAL_ACT	-0.064	0.408		-0.136	0.237	
NO_TRUST_PERSON	0.148	0.025	**	0.234	0.018	**
GOV_TRUST	0.026	0.637		-0.101	0.228	
NORMS_OF_RECIPROCITY	-0.051	0.575		0.232	0.111	
SHOCK	-0.022	0.500		-0.008	0.882	

TIME_DISCOUNT	-0.002	0.388		-0.004	0.313
RISK_AVERSION1	-0.031	0.074	*	0.005	0.863
RISK_AVERSION2	0.008	0.530		0.033	0.091
ALTRUISM	0.080	0.085	*	0.099	0.180
SATOYAMA2	-0.342	0.286		-0.050	0.920
POP_DECREASE1	-0.098	0.617		0.166	0.443
RURAL_RES_EXPERIENCE	0.103	0.276			
Pseudo R-squared	0.051			0.078	
Sample	768			337	

Note: Significance at the ten-percent level is indicated by*, significance at the five-percent level is indicated by ** and significance at the one-percent level is indicated by***.

5. CONCLUSIONS

In this paper, I used subjective classification standards to compare rural and urban residents in terms of their SWB. Results suggest that on average, rural residents have higher SWB than their urban counterparts, despite higher average income among the latter. For rural residents, factors other than household income significantly predict SWB. In addition, urban residents with positive attitudes towards the conservation of natural capital reported high levels of SWB. In contrast, for rural residents, some elements of social capital (i.e., friendliness with neighbors, number of trustworthy people) positively affect SWB. Finally, rural residents who migrated directly from urban areas reported high SWB. Taken together, these results provide new perspectives related to the values rural residents and that which makes rural areas attractive.

Furthermore, results of the analysis provide evidence for the importance conserving the rural environment for well-being. However, as indicated by past researchers also, "the level of environmental conditions in respondents' residential area" and "individual's recognition level and attitudes towards conservation" influence SWB differently (Kyoto University 2013). In this paper, for example, Satoyama index didn't affect SWB, on the other hand, positive attitudes for Natural Capital conservation have impacts on SWB. Therefore, awareness rising is very important in terms of keeping high SWB.

Finally, although this paper provides a number of new findings that can be used to inform policy, one limitation should be acknowledged. This study represents the first attempt to use data from Japanese respondents to compare urban and rural citizens in terms of their SWB. As a result, the results should be interpreted with caution. As argued by Hirschauer et al. (2015), the study of SWB in specific domains may help identify conditions foster well-being, but it will inevitably raise questions as to whether and how this research should inform policymaking in all contexts. As such, the results reported here should encourage future applied research in other geographic regions.

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