

Modeling residents' attitudes toward social business

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Abstract

Social innovation, which refers to the private sector's activities for solving social issues, has been attracting academic attention. Social innovation has been studied independently in Europe and the United States (U.S.). Europe focuses on social enterprises that function as a connection between the public, private, and resident groups, while the U.S. focuses on social entrepreneurs—the individuals with the ability to implement innovation. However, these studies of social innovation do not take into account the perspective of residents—the customers of social businesses. By observing this relationship, that between local residents as customers and social innovation actors in regional management, in a Nordic-style service marketing framework, the existence of local residents and the relationship between social enterprises and social entrepreneurs can be revealed. In this study, we clarify Japanese residents' interest, awareness, and participation in social business by conducting a questionnaire survey. Moreover, we elucidate the relationships among local residents, social enterprises, and social entrepreneurs.

Keywords: Social Business, Social Innovation, Service Marketing

1. Introduction

Due to Japan's rapidly aging population and declining birthrate, the economy and society of its rural areas are currently facing a crisis of sustainability. The public policies of local governments for solving these problems are insufficient in terms of their budget and capacity (Muramatsu and Yamaguchi 2018 p.216). Regional

management by corporations, residents' organizations, non-profit organizations (NPOs), and other private organizations is required to compensate for this lack of capacity. However, there is a lack of regional management-related practical research that explores how to utilize the human resources of the region and the demonstrates the medium- to long-term effects of this management.

In this context, social innovation, which refers to the private sector's activities for solving social problems, has been attracting attention. In Europe and the United States (U.S.), the resolution of social issues in a region is sought through social innovation by the region's social enterprises and social entrepreneurs. Social innovation is an effort to resolve social issues through business (Takahashi, et al, 2018, p. 99-100).

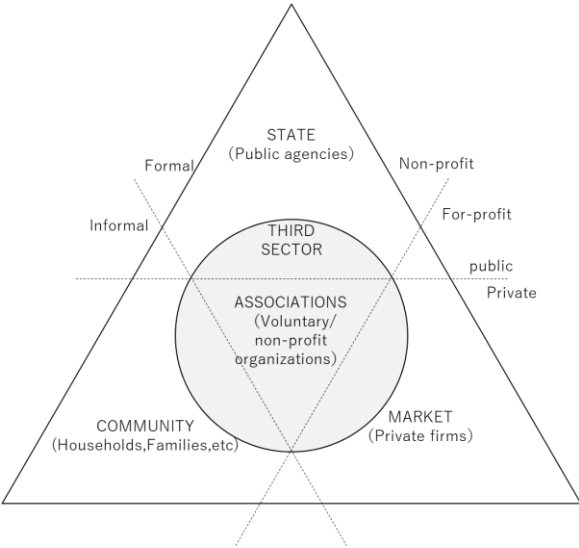
Social innovation research is relatively new and has attracted attention as an alternative means of solving social problems to government. The U.S.'s view of social innovation emphasizes the powerful activities of social entrepreneurs, whereas the European view emphasizes the coordinating role of government, market, and civil society promoted by social enterprises (Kerlin 2006). These two perspectives have been theorized and developed separately in the U.S. and Europe, respectively. However, in those social innovation theories, the discussion regarding citizens and local residents, who are the customers in regional management, has been scarce. In the case of regional management, the objective is to create regional value for local residents. Although this should be the central issue, the main issues presently are the preservation of social enterprises and the analysis of the business success of social entrepreneurs. We believe that marketing is effective in understanding local residents in regional management. The interpretation offered by service marketing, which develops marketing theory based on the value of consumers (=local residents) and not from the perspective of profits or companies, is considered to be especially effective. In this study, we will conduct a questionnaire survey to clarify the local residents' interest, awareness, and participation in social business. Additionally, we will explain the relationship between local residents, social enterprises, and social entrepreneurs.

The next section reviews social innovation studies in Europe and the U.S. and attempts to apply social innovation entities to the services marketing framework. In sections 3 and 4, a questionnaire survey of local residents is conducted to analyze the relationship between local residents, social enterprises, and social entrepreneurs, and an attempt is made to model a framework, which is then tested in section 5.

2. Social innovation actors in Europe and the United States

2-1 Social enterprises in Europe

The mainstream of social innovation research in Western Europe has been the analysis of social enterprises that belong to the “third sector” (Kerlin 2006). The third sector includes the “market sector,” which generates profits through market competition; the “government sector,” which collects profits as taxes and redistributes them to the public; and the “civic activity sector,” which is rooted in the community and works through self-help and mutual aid of local residents. A social enterprise is an organization that restricts private acquisition of profit and operates in the form of an NPO (Evers and Laville 2004).



Source: Evers and Laville (2004)

Figure 1: The welfare mix model

In the study of social enterprises, research has been accumulated mainly by EMES (L'EMergence Des Entreprises Sociales)—a network of researchers in 15 countries belonging to the European Union. They are conducting research and education through their sociology departments—focusing on organizations operating in the social economy separate from the for-profit sector. Research on social enterprises has been coordinated in various European countries, especially by EMES (Borzaga and Defourny 2001).

EMES developed a framework called the “welfare mix model” (Figure 1), which considers social enterprises as an intermediary between the “government,” “market,” and “local community.”

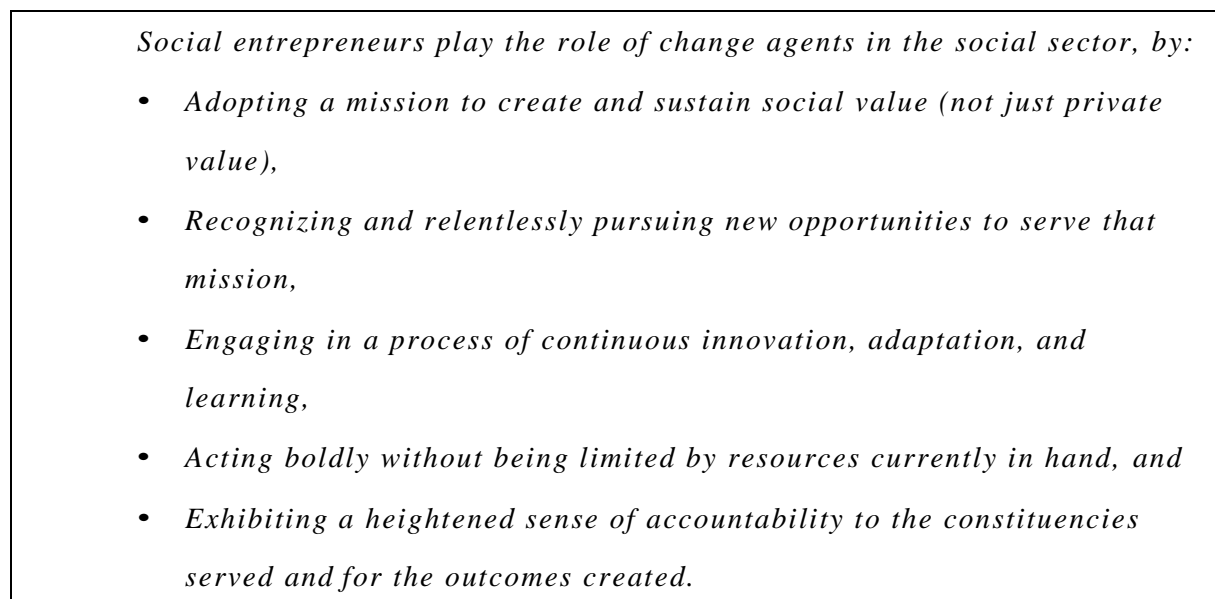
In the welfare mix model, the third sector (social enterprises) is positioned at the intersection of the government, market, and community. However, this model does not simply represent the position of the relationships among these actors. Instead, the model incorporates the interaction between social enterprises and the three poles. The welfare mix model combines the three poles: the redistributive function of the government, the exchange function of the market, the reciprocal function between communities, and the hybrid (mediating and nodal) function of these functions. The social enterprise functions as a “intermediating area” (Evers and Laville 2004) that connects the government, the market, and the community while simultaneously overcoming the problems faced by each aforementioned entity. It is defined as an organization that functions as an intermediary and link between multiple stakeholders that have different goals and economic positions.

As mentioned earlier, social innovation theory in Europe is based on the activities of social enterprises. Borzaga and Defourny (2001) defined the social enterprise in terms of economic criteria and social indicators. The main theme of social innovation theory in Europe is the organization and collaboration of social enterprises, which are organizations with high sociality that promote the solution of social issues as a connection with stakeholders.

2-2 Social entrepreneurs in the United States

Social enterprises in the U.S. have a strong sense of business, so as to generate business profits (Mulgan 2019). In the U.S., the concept of social innovation is broader than the European definition and includes philanthropic activities such as corporate volunteering, socially beneficial activities such as corporate social responsibility (CSR), hybrid businesses that combine profit and social objectives, and non-commercial activities that support social issues (Kerlin 2006).

In the U.S., the concept of social entrepreneurship emphasizes that the novelty of the “individual” and strong leadership of social entrepreneurs create social innovation. The definition of social entrepreneurship by Dees (1998) expresses this clearly (Figure 2).



Source: Dees (1998).

Figure 2: Dees' (1998) characterization of social entrepreneurs

In social innovation theory in the U.S., social enterprises are driven by the ideas and leadership of individual social entrepreneurs, and the content of social purpose encompasses whatever can be assumed as a social purpose (Fujii, Harada, and Otaka, 2013, p. 26). In addition, technical aspects such as management strategies and leadership behaviors that focus on increasing business income are emphasized in the

research.

As described above, the main themes of social innovation theory in the U.S. are the qualities of social entrepreneurs and the sustainable management of social enterprises led by social entrepreneurs.

2-3. Value co-creation concept of regional management

So far, I reviewed the status of two studies on social innovation. Two broad characteristics regarding these studies emerge from this review: one is a social innovation study in the U.S. posit that social entrepreneurs solve social problems based on innovation, whereas the other is that European studies indicate that social enterprises are the connector that connects market, government, and community. The direction of research on social entrepreneurs in the U.S. is thus quite different from that in Europe.

An issue in social innovation research is the lack of discussion regarding individual residents, who are the beneficiaries of social innovation. In the discussion of regional management, local residents are discussed from the marketing perspective, such as maximizing the satisfaction and value of local residents. However, in social innovation research, the focus is on organizational management. There are not enough discussion on how much local residents recognize and support social entrepreneurs and social enterprises, and how to involve them.

In this study, we focus on the relationship between “local residents,” who are the “customers” of social innovation, and social enterprises. This differs from the relationship between companies and customers in that a continuous involvement naturally exists. The relationship between the social enterprise and the local community is different from that between a company and its customers. Social entrepreneurs start and expand their businesses together with local residents. It is important to understand their interaction through the Nordic School of service marketing (Grönroos 2006) .

The Nordic School of service marketing has historically focused on building long-term trust relationships between companies and customers and emphasized value at

the usage and consumption stages.

The core of service marketing is the “moment of truth” (Carlzon 1983), when employees and customers meet and interact with each other face-to-face or through telephone support. If the customer perceives the quality of service to be poor during this interaction, the service provider loses the customer’s trust and may lose long-term business. The service encounter is the point of contact for this interaction.

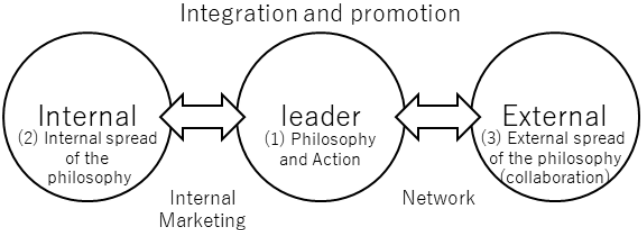
In addition, the company’s role is to communicate its corporate strategy to its employees and to communicate its service concept to its customers. In service marketing, the traditional form of marketing in which the company communicates its concept to its customers is called external marketing. Marketing activities such as market research, personal selling, advertising, sales promotion, pricing, etc. are carried out by full-time marketers.

On the other hand, the marketing that a company conducts for its own employees is called internal marketing. It involves creating and maintaining an internal service culture, actively marketing new products, services, systems, and processes; and improving employee motivation, service orientation, and customer-oriented performance. This internal marketing is the responsibility of top management, but it is also the responsibility of managers and supervisors who are senior to other employees.

As mentioned earlier, service marketing primarily focuses on marketing between employees and customers. This is called interactive marketing. When customers and employees meet and interact, the scope of the service will determine whether the customer’s expectations are met. If the experience is equal to or exceeds expectations, the perceived quality of service is high, which generates a strong foundation for building long-term customer relationships.

Fujioka (2016) discusses value co-creation marketing for solving regional issues through CRSV (Creating and Realizing Shared Value), which involves small and medium-sized enterprises (SMEs) creating shared value (Porter 2011) in the region, by using the framework shown in Figure 3. When SMEs promote the resolution of regional issues as a business, as in the case of CRSV, the success or failure of the

project is determined by the strong leadership of the company’s management and other leaders. These principles are spread within the organization through internal marketing, and external cooperation is promoted through networks. In the case of CRSV by SMEs, which requires a mechanism to promote cooperation with the local community, the service logic of the Nordic School, which considers customers as value creators, is posited to be effective.



Source: Fujioka (2016)

Figure 3: Philosophy penetration through service logic’s value co-creation concept

It was pointed out that the perspective of local residents has been lacking in social innovation theory. The framework set up by the Nordic School, which focuses on the discussion of local residents, may strongly compensate for this insufficiency.

2-4. Application of service marketing framework in regional management

In order to promote social innovation from the perspective of regional management, it is necessary to have a nodal role to connect regional actors and a role to promote concrete solutions to regional problems with regional residents. In this study, we assume the following relationships among social enterprises in European service innovation theory, social entrepreneurs in U.S. service innovation theory, and local residents. Social entrepreneurs work directly with local residents to solve social problems (interactive marketing). Social enterprises connect social entrepreneurs with local residents (external marketing). Social enterprises also support the activities of social entrepreneurs and local residents (internal marketing).

In the next section, a survey will show that the service marketing framework of the

Nordic School can be applied to this relationship between the entities of regional management.

3. Resident survey on regional management for social innovation

In the previous section, I pointed out that social innovation theory lacks the perspective of local residents, who are the “customers” in regional management and generate the value of social innovation, and that the framework set by the Nordic school of service marketing can compensate for this lack. In this section, we will conduct a questionnaire survey based on the viewpoint of local residents and quantitatively analyze the collected data. The main purpose of this study is to examine the effects of environmental improvement by social enterprises and the actions of social entrepreneurs on local residents. Additionally, the study seeks to support the involvement of local residents in social innovation.

An Internet-based questionnaire survey was adopted. The target population was residents of all over Japan who could participate in social activities and the age range was 18 to 70 years, excluding high school students. This survey was conducted in collaboration with Uemura(2021), who studied the attitudes of the residents about Social capital, a network of organizations that share social problems, and crowdfunding to solve that. The survey was conducted on the 9th and 10th of September, 2020. The number of respondents was set at 900 and the survey was completed after data from 900 respondents were collected.

In the survey items of this questionnaire, we queried the residents’ recognition of and interest in social entrepreneurs and social enterprises, and their involvement in them. Additionally, it asked about (1) their trust in social business activities, (2) their interest in social issues, (3) their willingness to participate in solving social issues, and (4) the actions being taken to solve social issues. The questions in the questionnaire survey were asked using a 5-point Likert scale. For items (2), (3), and (4) of the questionnaire survey, the work by Tanimoto et al. (2013 pp. 335-340) was used as a reference. Tanimoto et al. conducted a survey of customers who participated

in initiatives to address social issues, such as the use of reusable tableware at community events. There are no restrictions other than age in this survey. Thus, it is possible to include people who are indifferent to social issues, which further enriches the analysis. Items (2) and (3) in the questionnaire are related to the 17 Sustainable Development Goals (SDGs) devised by the United Nations that are of high interest in Japan. These include: poverty, health, education, human rights, inequality, energy, employment, security, and nature.

3-1. Analysis methods

There are two points to be clarified by the analysis. First, the analysis seeks to identify how many residents are interested in social businesses and how many are involved in their activities. These surveys will be clarified by descriptive statistics and the logistic regression analysis of the status of residents' participation. Second, the analysis seeks to create the models considered in Section 2. For the hypotheses based on the constructed framework, the observed variables were clarified by using exploratory factor analysis (principal factor and promax method) on the survey items obtained by questionnaire. In addition, covariance structure analysis will be conducted using the R-language package "lavaan."

3-2. Status of resident participation in social business

In this section, we analyze the status of residents' participation in social business. In the questionnaire survey, 21 social issues were presented and the respondents were asked about their interest in these issues. Table 1 shows the percentage of respondents who answered that they were "very interested" or "interested" with respect to each social issue.

The percentage of residents' interest in social issues varied depending on the social issue. 26.33% of the respondents were interested in "fair trade products that help developing countries," which garnered the least interest among the respondents. In terms of "the safety of food and products," which was the most popular question, 65.85% of the residents displayed an interest. It can be seen that residents' interest

in social issues is at a high level, partly due to the domestic companies work to promote the SDGs.

Table 1: Percentage of residents who are interested in each social issue.

	%	Correlation coefficient with interest in social enterprise
Think about the safety of food and products	65.89%	0.38321
Think about global warming	61.56%	0.36467
Think about the declining birthrate and aging population	61.11%	0.40275
Think about the protection of personal information	60.67%	0.34195
Think about administrative and political scandals	56.33%	0.38488
Think about increasing waste and promoting recycling	55.00%	0.42100
Think about labor instability	53.44%	0.36830
Think about energy issues such as energy saving and natural energy	53.11%	0.43911
Think about the deterioration of public security	51.44%	0.30907
Think about disease control	50.33%	0.36975
Think about human rights issues	47.89%	0.43605
Think about about corporate scandals	46.00%	0.38553
Think about the future of school education	45.67%	0.41313
Think about widening regional disparities	45.00%	0.42085
Think about the decline in food self-sufficiency	44.33%	0.41452
Think about animal protection, such as endangered animals	42.00%	0.38662
Think about passing on culture and technology to young people	40.33%	0.43711
Think about the decrease in opportunities and places to exercise	35.00%	0.32061
Think about gene utilization such as genetic modification	33.00%	0.40687
Think about the sports environment such as children's club activities	26.56%	0.35581
Think about fair trade products that help developing countries	26.33%	0.49924

Source: Author's calculations based on respondents' answers in the questionnaire survey

However, a low percentage (22.56%) of respondents answered that they were “very interested/interested” in social business (Table 2). Additionally, the percentage of

respondents who were “very trusted/trusted” in social enterprises was also low (24.11%) (Table 3).

Table 2: Interest in social business

	N	%
Interested	203	22.56%
Neither	185	20.56%
Not interested	512	56.89%
Total	900	100.00%

Source: Author’s calculations based on respondents’ answers in the questionnaire survey

Table 3: Trust in social enterprises

	N	%
Trust	217	24.11%
Neither	346	38.44%
Not trust	337	37.44%
Total	900	100.00%

Source: Author’s calculations based on respondents’ answers in the questionnaire survey

This result also shows that compared to the strength of interest in social issues, the interest in social business and trust in social business that aims to solve those social issues are not high. As for the correlations between “interest in social issues” and “interest in social enterprises” on the Likert scale, all p-values were $p < 0.001$, which indicates that the correlations were not uncorrelated. However, the correlation coefficients were all positive but below 0.5, which means that the correlations were not strong.

In order to investigate the relationship between the items, we conducted a logistic regression analysis with the presence or absence of interest in social business as the objective variable, and analyzed the explanatory variables that affect the objective variable. The explanatory variables were gender, age, occupation, place of residence, family structure, and household income, with dummies for each of the following attributes: “awareness of social business,” “trust in social enterprises,” and “interest

in social business”. The input items are “awareness of social business,” “trust in social enterprises,” “behavior toward solving social problems,” “willingness to participate in solving social problems,” and “willingness to cooperate with residents in solving social problems” (The list of input items is shown in Table 4).

Table 4: Logistic regression input variables

Explanatory variables	Notes	Explanatory variables	Notes
Male	Gender dummy variable	More than 4 million yen	Household Income dummy variable
Age 20s	Age dummy variable	More than 6 million yen	Household Income dummy variable
Age 25s	Age dummy variable	8-10 million yen	Household Income dummy variable
Age 30s	Age dummy variable	Government employee	Occupation dummy variable
Age 35s	Age dummy variable	Manager/board member	Occupation dummy variable
Age 40s	Age dummy variable	Company employee, clerical	Occupation dummy variable
Age 45s	Age dummy variable	Company employee, technical	Occupation dummy variable
Age 50s	Age dummy variable	Company employee, other	Occupation dummy variable
Age 55s	Age dummy variable	Self-employed	Occupation dummy variable
Age 60s	Age dummy variable	Free occupation	Occupation dummy variable
Hokkaido region	Address dummy variable	Full-time housewife/husband	Occupation dummy variable
Tohoku region	Address dummy variable	Part-time job	Occupation dummy variable
Kanto region	Address dummy variable	Student	Occupation dummy variable
Chubu region	Address dummy variable	Other	Occupation dummy variable
Kinki	Address dummy variable	Awareness of the activities of socially responsible enterprises	
Chugoku region	Address dummy variable	Trustworthiness of social enterprises	
Shikoku region	Address dummy variable	Interest in social issues	Mean value of concern for all 21 types of social issues
Unmarried	Unmarried or married dummy variable	Willingness to give consideration to solving social issues	Mean of intention to care about all 3 types of social issues
Without children	Presence of children dummy variable	Willingness to share social issues with others	Mean intention to share all 4 types of social issues
Less equal than 2 million yen	Household Income dummy variable	Willingness to take action to solve social issues	Average of behaviors toward all 11 social issues
More than 2 million yen	Household Income dummy variable		

Source: Prepared by the author

Table 5: Results of logistic regression analysis

Objective variable: Interest in social business

	Coefficient	Std Err	t-value	p-value
Constant	-0.17462	0.092595	-1.886	0.060 .
Age: 30s	-0.060197	0.036134	-1.666	0.096 .
Age: 50s	-0.065016	0.032611	-1.994	0.046 *
Age: 60s	-0.063646	0.033305	-1.911	0.056 .
Household income: 8-10 million yen	-0.054541	0.035584	-1.533	0.126
Occupation: Civil servant	0.151115	0.057488	2.629	0.009 **
Occupation: Manager, executive	0.188265	0.07574	2.486	0.013 *
Occupation: Company employee (clerical)	0.081512	0.031705	2.571	0.010 *
Occupation: Company employee (other)	0.04287	0.030533	1.404	0.161
Occupation: Student	0.347732	0.086375	4.026	0.000 ***
Recognizing Social Business	0.061962	0.009362	6.618	0.000 ***
Trust companies and NPOs that aim to solve social problems	-0.071504	0.01347	-5.308	0.000 ***
Interest in social issues	0.059914	0.018331	3.269	0.001 **
Willingness to cooperate with residents to solve social issues	0.101568	0.017559	5.784	0.000 ***

***p< .001 **p< .01 *p< .1 .p< .5

Source: Author’s calculations based on respondents’ answers to the questionnaire survey

The objective variable—“interest in social business”—was transformed into a binary type in which the top two levels of the five Likert scale—“very interested” and “interested”—were considered to display interest, whereas the rest indicated disinterest. The results were narrowed down to 13 variables that maximized the AIC by narrowing down the explanatory variables using the stepwise method (final goodness of fit AIC= 596.45). The results of this logistic regression analysis are shown in Table 5.

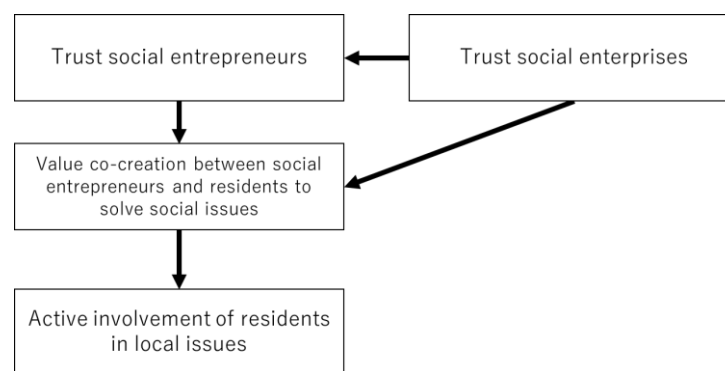
From this analysis, it is clear that residents have an active interest in social business. “recognizing social business” is a variable that is considered to be strongly related to the “interest in social issues,” as indicated by the p-value and t-value. The second most relevant variable is “willingness to cooperate with residents to solve social issues.”

The second most relevant item was “trust companies and NPOs that aim to solve social problems.” However, in our model, the higher the trust, the lower the interest in social business. This means that the more trustworthy the social enterprise, the less the people’s interest in social business. In other words, the more trustworthy a social enterprise is, the more people depend on it to solve their social problems, and the less interest they have in social business. In terms of the occupation of the residents, “students,” “civil servants,” and “managers,” and “executives” were observed to have a higher interest in social business. In particular, students were the most interested in social business, while residents in their 50s and above tended to be less interested.

The results show that although local residents are strongly interested in social issues, their interest and trust in social business tends to be lower than their interest in social issues. Those who were more interested in social business were people who are aware of social business and are willing to cooperate with other residents to solve social problems. In addition, a weakened interest in social business was found among those who trust companies and NPOs that implement social business.

4. Value co-creation in social business from the perspective of residents

In this section, the relationship between European social enterprises and U.S. social entrepreneurs in the study of social innovation was modeled using the perspective of local residents based on section 2-4 . In this model, interactive marketing is conducted between social entrepreneurs and local residents, and the resulting interaction generates value for local residents. Figure 4 shows the model constructed from the perspective of local residents.



Source: Prepared by the author

Figure 4: Hypothesis: Value co-creation in social business from the perspective of residents

For residents, if social enterprises are trustworthy, they will generate trust in social entrepreneurs. In addition, residents' trust in social entrepreneurs makes it possible for them to be actively involved in value co-creation with social entrepreneurs. This will lead to the co-creation of value by local residents together with social entrepreneurs in order to solve social problems. It is hypothesized that the value co-creation of local residents will manifest itself as the involvement of local residents in local issues.

We will attempt to model these variables using covariance structure analysis, and extract observables for the model from the survey items using exploratory factor analysis. In this study, the first observed variable to be extracted by factor analysis is the item that asks about trust in social entrepreneurs and social enterprises, whereas

the second is their method of involvement in local issues.

As for the first item, the questionnaire survey presented the following types of social enterprises to respondents: “1. representative in a leadership position,” “2. partnership with the government and local organizations,” “3. the information is well disclosed,” “4. a non-profit organization,” “5. a company or other for-profit organization,” “6. sponsored by a sports team,” “7. the projects are funded on an ongoing basis,” “8. aims to solve a social issue of interest to them,” and “9. The purpose is clear.” The purpose of this analysis was to extract the image of a social enterprise that local residents can trust. However, since item 6, “sponsored by a sports team,” indicates a specific social enterprise, this item was removed and an exploratory factor analysis was conducted for the remaining eight items. In this factor analysis, the principal factor method was used, and the Promax method was used to rotate the factor axes. The results of the factor analysis are shown in Table 6. The cumulative contribution of the three factors obtained here is 69.0%.

Table 6: Factor analysis for trust in social entrepreneurs and social enterprises

	Factor 1	Factor 2	Factor 3
A company or other for-profit organization	0.629	0.162	0.213
A non-profit organization	0.219	0.712	0.273
Representative in a leadership position	0.519	0.515	0.288
Aims to solve a social issue of interest to them	0.562	0.507	0.37
The information is well disclosed	0.396	0.393	0.786
The purpose is clear.	0.535	0.478	0.479
Partnership with the government and local organizations	0.48	0.491	0.474
The projects are funded on an ongoing basis	0.648	0.413	0.374
Proportion Var	2.12	1.85	1.55
Cumulative Var	69.0%		

Trust in for-profit organizations
Trust in social entrepreneurs
Trust in social enterprises

Source: Author’s calculations based on respondents’ answers in questionnaire survey

The factor 1 is that social entrepreneurs and social enterprises that are trustworthy in solving social problems are “for-profit” organizations that have a clear purpose. Factor 1 is named “trust in for-profit organizations.” Factor 2 is oriented toward non-profit and gives credit to the leadership of representatives who seek to

solve issues of concern to the public. In U.S. social innovation theory, this is exactly what is meant by trusting social entrepreneurs. Factor 2 is named “trust in social entrepreneurs.” Factor 3 is that organizations that disclose information, have clear objectives, collaborate with government and local organizations, and promote sustainable business are worthy of trust. This overlaps with the image of social enterprises in the European social innovation theory. Factor 3 is named “trust in social enterprises.” In the present model, I will employ two input variables, “trust in social entrepreneurs” (Factor 2) and “trust in social enterprises” (Factor 3).

This is followed by the determination of input variables for the way in which local residents are involved in social issues. In the questionnaire, the willingness of local residents to voluntarily take action and participate in solving social problems were queried through the following three categories: “Intention to consider solutions to social issues,” “Tend to follow social rules in my daily life,” and “Favors community sports activities.”

In addition, we queried their willingness to take action to solve social problems by asking about their: “intention to take action to solve social issues,” “intention to participate in activities that observe social rules,” “intention to participate in community activities such as neighborhood associations,” and “intention to participate in community sports activities.”

Next, we determined the willingness of residents to share social issues by assessing whether they: “communicate the importance of observing social rules to neighbors and ask for their cooperation,” “communicate to neighbors the importance of community activities and ask for their cooperation,” “communicate to neighbors the importance of solving social problems and ask for their cooperation,” and “ask neighbors to participate in local sports activities.”

The next categories, namely “intention to give consideration to solving social issues,” “intention to take action to solve social issues,” and “intention to share social issues with residents,” are those which indicate the gradual increase in their level of involvement. In this study, this model is for customers who are engaged in value co-creation with social entrepreneurs to solve local issues. Thus, “intention to take

action to solve social issues” and “intention to share social issues with residents,” which are the stages of actually taking action, are chosen as input variables.

Finally, in the questionnaire survey, 11 questions are asked about behavior toward social issues. An exploratory factor analysis was conducted on these questions. In this factor analysis, the principal factor method was used, and the Promax method was used to rotate the factor axes. The results of the factor analysis are shown in Table 7. The cumulative contribution rate of the four factors obtained was 89.6%.

Table 7: Factor analysis of behavior toward social issues

	Factor 1	Factor 2	Factor 3	Factor 4
Gathering and discussing with friends who cooperate on the Internet using the Web and SNS to solve social problems.	0.858	0.084	0.054	0.152
Gathering and discussing with friends in person, not online, to help solve social problems.	0.802	0.074	0.217	0.056
Participate in local sports activities.	0.741	0.073	0.203	-0.217
Participate in events that aim to solve social problems.	0.663	0.185	0.444	-0.013
Buy products that prioritize local production for local consumption.	0.185	0.504	0.51	0.11
Do not buy products from companies that have been involved in scandals.	0.112	0.542	0.094	0.09
Buy products from stores that have good disease prevention measures.	0.098	0.733	0.175	-0.082
Buy products with safety and security in mind.	0.015	0.795	0.153	-0.032
Participate in local cleanups and resource collection campaigns.	0.384	0.245	0.546	-0.146
Gather information to solve social problems, including the use of the Web and SNS.	0.486	0.338	0.342	0.18
Buy products from companies and stores that are active in solving social problems.	0.388	0.452	0.476	0.195
Proportion Var	2.960	2.148	1.253	0.198
Cumulative Var	89.6%			

Intention to act to solve social issues **Intention to purchase with awareness of social issues** **Intention to act within the scope of daily life** **Intention to use Web information**

Source: Author’s calculations based on respondents’ answers in the questionnaire survey

The four factors extracted by this factor analysis will be discussed individually. Factor 1 is named “intention to take action to solve social issues,” which includes gathering friends, holding discussions, and participating in events. Factor 2 is named “intention to purchase with awareness of social issues,” which involves purchasing goods that are locally produced and locally consumed and purchasing products from

stores that have good risk management for scandals. Factor 3 is “intention to act within the scope of daily life,” including participation in community activities such as cleaning and resource collection. Factor 4 is called “intention to use Web information” and includes buying products from companies that are active in solving social problems, gathering information on solving social problems, and gathering friends and having discussions on social media.

Since factor 1, “intention to take action to solve social issues,” is appropriate as the action that will be created by value co-creation from these four factors, and factors 2, 3, and 4 are weak as concrete actions, only factor 1 will be input into the model.

5 Co-creation model of social business residents and social enterprises

In the previous section, we examined the input variables of the co-creation model of social business between residents and social enterprises. We examined the input variables for the co-creation model of social business between residents and social entrepreneurs, which include “trust in social enterprises,” “trust in social entrepreneurs,” and “intention to take action to solve social issues,” “intention to share social issues,” and “Intention to participate in solving social problems.” The hypotheses obtained from the previous studies discussed in Section 2 are that “trust in social enterprises” generates “trust in social entrepreneurs,” and “trust in social entrepreneurs” generates “trust in social businesses.” In this study, we designed a model which results in solution behavior toward solving social problems and conducted a covariance structure analysis.

The structure of the model and the coefficients of each path are shown in Figure 5. In this model, the variables with particularly large factor loadings for the two factors—“trust in social enterprises” and “trust in social entrepreneurs”—extracted through the factor analysis of trust in social entrepreneurs and social enterprises were used as observation variables.

In addition, “intention to act to solve social issues,” and “intention to share social issues” were set as latent variables based on Factor Analysis of Behavior toward Social Problems and the question of local residents’ involvement in social issues. As

for “Intention to act to solve social issues,” the variables that had particularly large factor loadings were placed as observation variables.

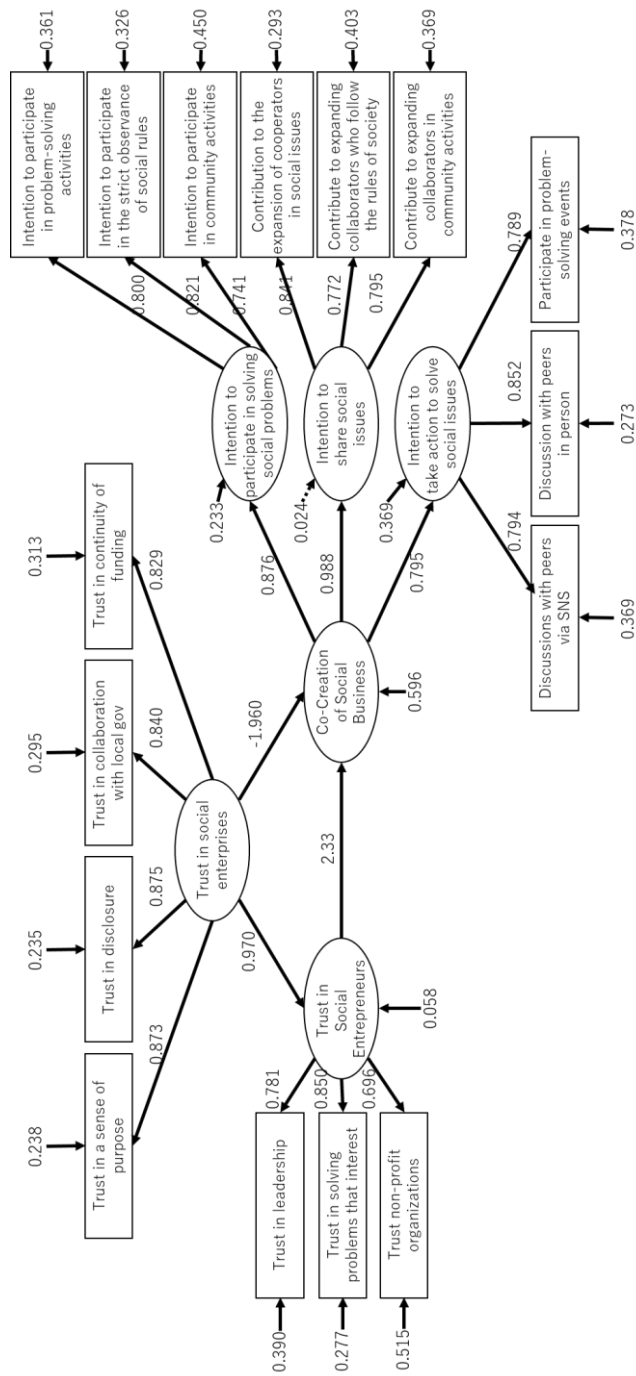
The structure of the model and the path coefficients are shown in Figure 5. The goodness of fit of the model is shown in Table 8. The goodness of fit of the model was CFI = 0.954, TLI = 0.944, and RMSEA = 0.071.

Table 8: Covariance structure analysis model goodness of fit indices

chi-squared value	542.755
degree of freedom	98
P-value	0.000
CFI	0.954
TLI	0.944
RMSEA	0.071
SRMR	0.067
AIC	35025.271
BIC	35207.762

Source: Author’s calculations based on respondents answers in the questionnaire survey

The results of the analysis of covariance showed that the relationship between “trust in social enterprises,” “trust in social entrepreneurs,” and “co-creation by social business,” which were defined as latent variables, increased when trust in social enterprises increased. Additionally, when trust in social entrepreneurs increased, co-creation by social business increased. This relationship was supported by the results. However, trust in social enterprises did not directly lead to co-creation of social businesses, and a negative causal relationship was found in the relationship between the factors.



Source: Author's calculations based on questionnaire survey

Figure 5: Model of residents' and social enterprises' co-creation of social business

From the above, it is possible to conclude that value co-creation in social business by social entrepreneurs and local residents, who are directly involved with local residents and are “familiar” with them, can be established. In this way, local

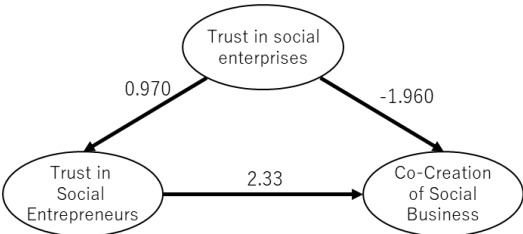
residents can get to know local issues more deeply and expand the scope of their activities. For the local residents, the social enterprises that act as a link between the various entities are not the ones that should facilitate co-creation, but the ones to trust and entrust.

The model also supported that the trust in social enterprises leads to the trust in social entrepreneurs. The model suggested that if there is a social enterprise with a clear role to connect the region and can be relied on, it may be a factor that hinders co-creation for local residents. However, for social entrepreneurs, it is suggested that social enterprises have an important role because social entrepreneurs who are secured by the trust of social enterprises are able to co-create alongside local residents.

6 Findings and theoretical considerations

This study aimed to find out the relationship between local residents, social enterprises, and social entrepreneurs in social innovation that promotes the resolution of local problems. I conducted a questionnaire survey based on residents' perspectives to find out their interest, awareness, and participation in social business, and modeled the relationship between local residents, social enterprises, and social entrepreneurs.

This study led to the following findings. First, although residents are highly interested in social issues, there is a lack of trust in some aspects of social business by social enterprises and social entrepreneurs.



Source: Author’s calculations based on respondents’ answers in the questionnaire survey

Figure 6: Model of residents’ and social enterprises’ co-creation of social business (partially extracted)

Second, as shown in Figure 6, the relationship between trust in social entrepreneurs and co-creation of social businesses by local residents was higher when the trust in social entrepreneurs was higher.

In other words, these two conclusions were drawn.

- Regional residents should move toward value co-creation in their interactions with credible social entrepreneurs.
- The credibility of social entrepreneurs, who are the direct counterparts of residents' value co-creation, is enhanced by the credibility of the social enterprises that support them.

Third, the interest in social business does not directly lead to local residents' value co-creation for solving social problems. The covariance structure analysis shows that "trust in social enterprises" has a negative causal effect on the resolution of social issues. This suggests that there are necessary conditions for social entrepreneurs and social enterprises to conduct value co-creation alongside local residents. In service marketing, Grönroos (2007) describes the respective roles of firms and employees. Similarly, there may be roles for social entrepreneurs and social enterprises to implement it in their interaction with local residents.

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