

Community Currency Game: A Tool for Introducing the Concept of Community Currencies

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Keywords

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Since the 1980s, many types of community currencies have been issued and utilized (Hirota, 2013). A Community currency has the following characteristics that distinguish it from legal tender: (a) it is issued by a community organization; (b) it cannot be used outside the community; (c) it has a zero (or negative) interest rate; (d) it can encourage community members to help each other. Nishibe (2013) interpreted community currencies as integrative communication media that promote revitalization of the local economy and encourage community activities.

However, some community currencies have encountered problems with sustainability. Yamazaki (2013) pointed out that about 60% of community currencies in Japan were terminated or suspended because of a circulation failure within certain areas. We think that this problem stems not only from the issue of the design of community currencies and their circulation, but also from people's perception about money, which makes it difficult for a community currency to be accepted in some areas. "Ren" is one of the successful community currencies in Japan. In order to ensure that residents understood the new currency, the issuer of Ren held more than one hundred briefing sessions in the first stage of implementation. Kobayashi, Hashimoto, Kurita and Nishibe (2013) claimed that the acceptance of "currency diversity" by many residents is important for the circulation of

a community currency. The above studies suggest the need for a more effective tool for educating community members about a community currency in order for it to succeed in gaining circulation.

Methods

As is characteristic of research on community currency, Hayashi and Yosano (2008) used a gaming simulation and found that an economic divide within a community affects the circulation of a community currency. Similarly, Yoshida (2012, 2013) developed a gaming simulation, the Community Currency Game (CCG), for learning the structure of a community currency.



Figure 1 The Community Currency Game in Iide (left) and Tsubata (right)

Participants

In this study, we improved upon the Community Currency Game and applied it to residents of two towns, Iide and Tsubata; these were chosen because an introduction of a community currency is planned for the two towns in the future. Iide is a town in the mountainous Yamagata Prefecture of Japan. There are plans to introduce a community currency in order to promote voluntary work in agriculture. Tsubata is a small town in the Ishikawa Prefecture of Japan. The introduction of a community currency is planned there in order to promote volunteer work and to revitalize the local economy. We played the Community Currency Game on December 4, 2013 in Iide and on January 25, 2014 in Tsubata (see Figure 1) In Iide, twelve people participated in this game; in Tsubata, sixteen people participated.

Study methods

A basic description of the study methods, including its purpose, participants, and procedures, is as follows:

- Purpose: For participants to learn the system of community currency and to imagine that community currency circulates in their own town;
- Participants: Residents and leaders of each town;
- Procedure: 1. Pre-game questionnaire 2. Community Currency Game 3. Post-game questionnaire 4. Debriefing.

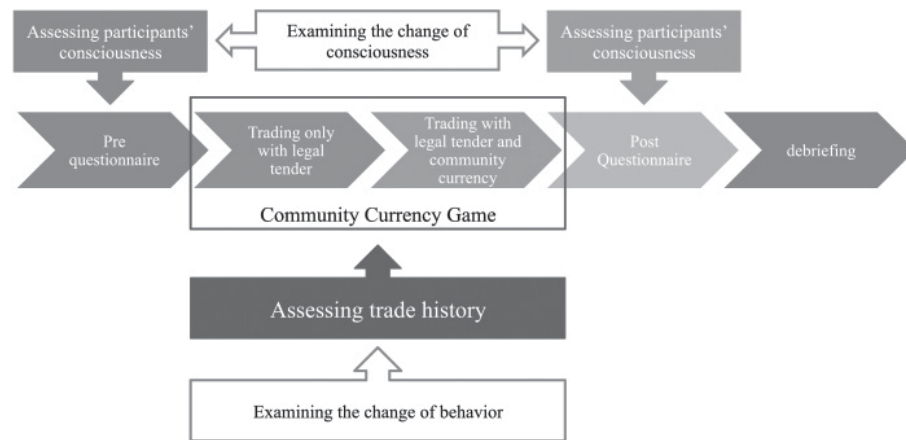


Figure 2 Procedure

The procedures utilized directly connected with the goals of our research program. They are as follows: (a) to examine the change in behavior of the participants in terms of their use of a community currency; (b) to examine the participants' change of consciousness as a result of the game through pre- and post- questionnaires. We particularly focused on the participants' cognitive social capital and their tolerance of the diversity of money (see Figure 2).

Design of the Community Currency Game (CCG)

We designed the Community Currency Game as follows:

1. Determine six types of residents in the town (businessperson, student, etc.); each participant is assigned to one of these six roles.
2. The participants trade goods and services according to the dice. The participants throw a dice to decide about their trade in goods and services. When participants buy goods and services, they must choose a shop inside or outside the town. In this game, the price of goods and services inside the town is higher than that outside.
3. Participants are faced with some problem (snow removal, etc.), the nature of which is determined by the dice. Other participants can volunteer to help them. We have two types of volunteer services in this game. One is a private volun-

teer service in which a participant serves another participant (e.g., housecleaning). Another is a public volunteer service in which a participant serves the community (e.g., supporting a festival in the town). If they perform their volunteer service, their income from outside the town reduces ten percent on their next turn as a cost of volunteer work. In these situations, they choose to pursue either their own interest or the public interest.

4. Each participant gets five turns. The first half consists of two turns; during this half, the participants trade only with legal tender (yen). In the three turns of the second half, they trade with legal tender and community currency (yukidaruma, meaning snowman; ¥1=1Y). In the second half, participants decide the proportion of community currency to be used to pay the selling price of goods traded. Participants also decide whether to receive community currency (0Y or 500Y or 1000Y) for volunteer services rendered.

Results

The results of the Community Currency Game are as follows:

- From the trade history
- The proportions of items bought inside the town increased after introducing a community currency (see Figure 3).
- The rate of volunteering increased after the introduction of the community currency (see Figure 4).
- The proportion of community currency in the selling price of goods that sell only in the town was higher than the proportion in that being sold inside and outside the town (see Figure 5).
- The amount received for public volunteer services was less than that received for private volunteer services (see Figure 6).

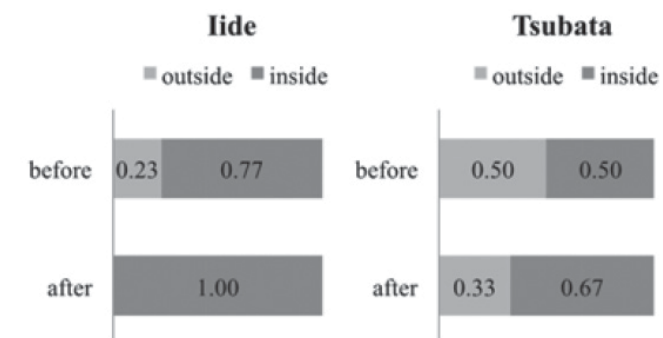


Figure 3 Proportion buying items inside vs. outside the town

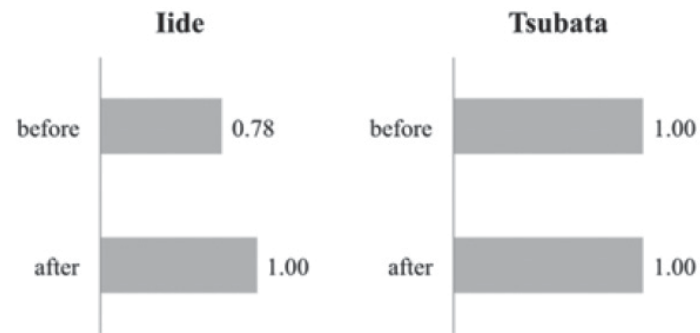


Figure 4 Rate of volunteering

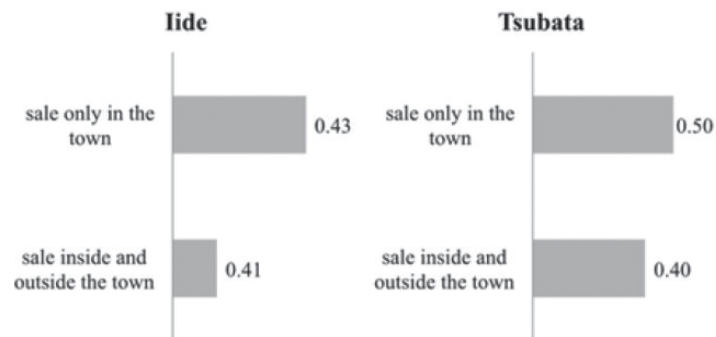


Figure 5 Proportion of CC in selling price

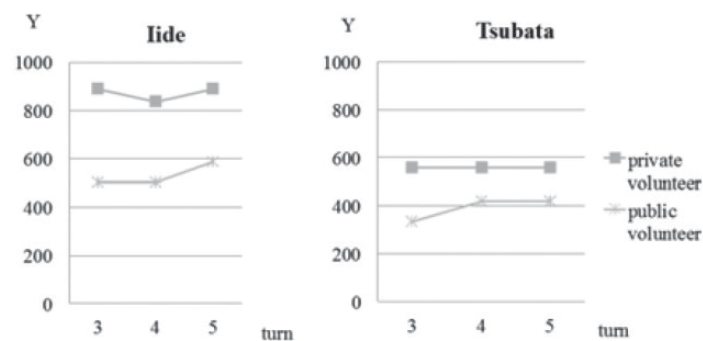


Figure 6 Consideration of volunteer service in CC

From the pre- and post-game questionnaire (see Table 1)

- Participants' attitude towards the diversity of money was positively affected through participation in the Community Currency Game.
- By participating in the Community Currency Game, participants came to recognize the meaning of the network formed by a community currency.

Table 1 Change of Consciousness through the CCG

Iide (n=11)	Pre-game	Post-game	Deviation	p-value
	Mean	Mean		
Do you think it is good that money can be created or issued freely by people?	2.73	3.18	0.45	
Do you think it is good that money can be issued or created not only by the central bank or commercial banks, but also by people or communities?	2.90	3.50	0.60	$p < .05$
Do you think it is good that money can be something that mutually connects people?				$p < .01$
Tsubata (n=15)	Pre-game	Post-game	Deviation	p-value
	Mean	Mean		
Do you think it is good that money can be issued or created not only by the central bank or commercial banks, but also by the government?	2.67	3.67	1.00	
Do you think it is good for money to be single?	3.40	2.93	Δ 0.47	$p < .05$
Do you think it is good that we can choose favorite ones out of different moneys?	2.73	3.40	0.67	
Do you think it is good that money can be something that mutually connects people?	3.07	3.70	0.63	

5: Strongly affirmative, 4: Weakly affirmative, 3: Neutral, 2: Weakly negative, 1: Strongly negative

Discussion

By examining the trade history, we found that, over the course of the Community Currency Game, participants' behavior transformed from self-interest seeking to public interest seeking. We confirmed that participants could learn the structure of a community currency through this game. Moreover, from an analysis of the pre- and post-game questionnaire, we found that participants developed a tolerance for the diversity of money and came to recognize the meaning of the network formed by a community currency. We confirmed that participants could develop a friendly attitude toward the community currency through playing this game.

Of course, there is a statistical problem about the number of participants in these results. However, it is more important to use these results for a design of a community currency than to reveal the statistical significance. In the debriefing, we showed these results to participants and discussed a need to introduce a community currency in their towns. In future research, we will consider the effect of

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this game on the design of a community currency in Iide and Tsubata. The design consists of two factors: design of the circulation of a community currency and design of the organization that issues a community currency. In these towns, these factors are currently being determined.

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