

Community Currency Game:

Results and the next challenge

Masayuki YOSHIDA¹, Shigeto KOBAYASHI²

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Since the 1980s, many types of community currencies (CCs) have been issued and utilized (Hirota, 2013). However, CCs in Japan encounter many types of problems: funding, creating awareness among people of what a CC is, and designing a CC system for many different stakeholders (Nishibe, 2013, Yamazaki, 2013). These factors bring about the problem of sustainability. Practitioners are of the opinion that it is necessary to create a common understanding, among many different stakeholders, of the goals of introducing a CC (Nishibe, 2013).

In order to resolve these problems, we created a gaming simulation, *the Community Currency Game (CCG)*. We trialed the *CCG* with residents who intend to introduce a CC in their town. In this research, we discuss the results of our project. We also examine the remaining unresolved issues of our project.

1. Design of *the Community Currency Game*

The Community Currency Game (CCG) is a face-to-face, analog game. The purpose of the game is to learn the system of CC (how to use CC) and to promote a common understanding among many different stakeholders (what is our goal).

The main rules of the game are as follows (Yoshida and Kobayashi, 2014a):

- Determine eight to five types of residents in the town (businessperson, student, etc.); each participant is assigned to one of these roles.
- The participants trade goods and services according to the dice. The participants throw a dice to determine their trade in goods and services. When partici-

¹ Yoshida, M.: Joetsu University of Education, Joetsu, Japan, yoshida@juen.ac.jp

² Kobayashi, S.: Japan Advanced Institute of Science and Technology (JAIST), Nomi, Japan, s-kobaya@jaist.ac.jp

pants buy goods and services, they must choose a shop inside or outside the town. The price of goods and services inside the town is higher than that outside.

- 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. 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.
- The game consists of two phases. The first phase consists of two turns; during this phase, the participants trade only with legal tender (yen). The second phase consists of three turns. In the second phase, they trade with legal tender and community currency. In this phase, 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 for volunteer services rendered.

2. Results of the *Community Currency Game*

We applied the *CCG* to residents of some towns: Iide, Tsubata, Nomi, etc. (Yoshida, 2012a; 2012b; Yoshida and Kobayashi, 2014). To evaluate how residents learn to use a CC, we considered the trade history of the *CCG*. To examine how they create a common understanding of their goal, we used pre- and post-game questionnaires.

The trade history of the *CCG* pointed out that: 1) the proportions of items bought inside the town increased after introducing a CC; and 2) the rate of volunteering increased after introducing a CC (Yoshida and Kobayashi, 2014a; 2014b). From the pre- and post-game questionnaires, 3) participants' attitudes towards the diversity of money were positively affected; and 4) participants came to recognize the meaning of the network formed by a CC (Kobayashi, Yoshida and Hashimoto, 2013).

These results suggest that the *CCG* does not only teach participants how to use a CC but also changes their views of money and community. In fact, we found that 5) a positive feedback relationship exists between using a CC by volunteering and community-oriented values. In debriefing, participants can create a common understanding among many different stakeholders with these results. The *CCG* has an advantage in introducing the concept of a CC.

3. Remaining unresolved issues of the *Community Currency Game*

However, this game has some remaining issues. In the post-game questionnaire, many participants answered that they want to introduce a CC in their town but do not know whether to use the CC on their own. These results point out that the CCG can encourage introducing a CC but can't encourage using a CC sufficiently. In order to successfully implement use of a CC, we must identify the factors that encourage using a CC. We constructed a multi-simulation model and identified the factors that influence circulation of a CC (Kobayashi, Takahashi and Hashimoto, 2012).

In the simulation model, we identify the conditions of circulating a CC: practicable policy by issuer of CC (level A), resident agents' behavior (level B), internal rules of resident agents (level C), and the macro level (level D) (fig.1).

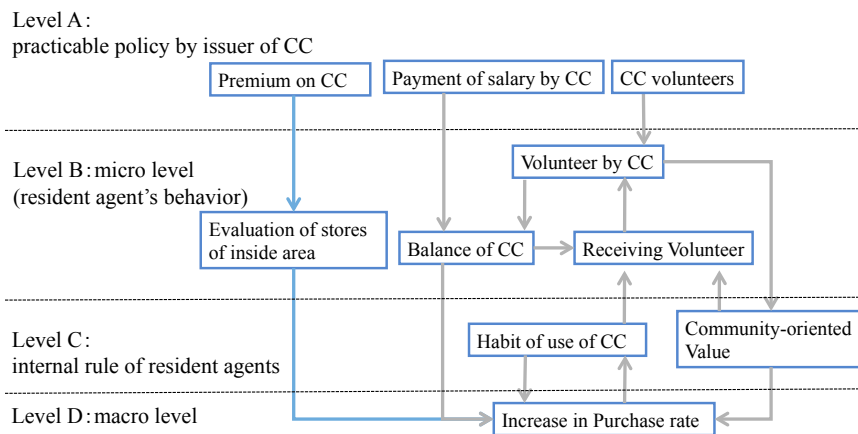


Fig.1 Causal Loop of the Purchase Rate Increase (Source: Kobayashi, Takahashi and Hashimoto (2012))

Factors in Level A are the factors that an issuer of a CC can control. These are the key factors that should be considered when designing a CC. Factors in Level B represent resident agents' behavior. These factors determine the commercial and community activities of the town. Factors in Level C represent the residents' internal rules or values. Factors in Level D represent the consequences of residents' activities.

In the simulation three factors in Level A promote use of a CC and bring about an increased purchase rate in the town (Level D). However, if we think about the sustainability of circulating a CC in the town it is important to focus on the internal rules of resident agents (Level C). Yoshida and Kobayashi (2014b) pointed out

that community-oriented values and tolerance of using multiple types of money promote use of a CC. The next challenge in our project is to develop another gaming simulation as a tool for encouraging use of a CC and to examine the feasibility of the simulation.

4. Next challenge in our project

One of the limitations of our study is that the relationship between the consciousness of money and community and CC circulation is unclear. We thus need to develop another gaming simulation to examine the relationship between consciousness of money and community and CC circulation. We can use multi-agent simulation for the purpose of examining this question.

Our next challenge is to create a gaming simulation that promotes use of CC through influencing participants' consciousness of money and community. In order to carry out this project, we need to consider more effective ways to use the simulation and gaming.

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