New Public Services Created by Diversity & Connections: Possibilities for Applications of New Technologies


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Introduction

Looking 10 to 30 years into the future against the backdrop of a declining birthrate and aging population, as well as economic globalization, the most serious economic problems facing Japan can be narrowed down to three: population decline (including a declining birthrate and aging population); low economic growth; and increasing poverty. The seriousness of these three problems is gradually eroding the various "foundations" on which we have relied in our daily lives for income and distributed resources at both the macro (e.g. national, regional, corporate) and micro (e.g. household) levels.

Unlike during times of high economic growth driven by population growth, these problems cannot be effectively addressed through uniform, rigid policies and systems, and this is causing a variety of problems at the individual level, including in people's daily lives and in employment.

For example, with cities acting as "sponges" in rural areas where the number of abandoned houses is increasing because of population decline, infrastructure could deteriorate and the outflow of people from the region accelerate. While low economic growth means that competition among companies intensifies, this is destabilizing the Japanese employment model, characterized by lifetime employment and seniority-based wages, and the model's support function for people's daily lives is weakening. Household styles are diversifying, with an increasing number of single-person households as people age or choose not to marry, causing the family support function to decline and isolation to increase. Functions previously borne by local communities, families, and companies are weakening, causing risks to become more complex, and this means that the socially vulnerable are facing risks that are complex and complicated, and cannot be addressed by traditional social security programs. As low growth increases inequality, the failure of social security leads to a further increase in poverty.

The failure of social security programs is particularly severe. Traditional social security has been based on the concept of "self-support", and provisions for risks in daily lives (e.g. uncertain lifespans, illness, need for nursing care) that could be dispersed through the law of large numbers were addressed through "mutual support" (social insurance). Mutual support underpins self-support, and for situations like poverty that cannot be addressed through self-support or mutual support, a system of mutual support and public support was built by envisioning the typical risks people face in their daily lives under a basic philosophy of filling in gaps with "public support" (i.e. support for daily life). It has now become clear, however, that these traditional systems are reaching their limits.

Against this backdrop, in this article I would like to propose two concepts for rebuilding public support. These are a "public donation market" and "cryptocurrency x voluntary provision of public assets", which I explain below.

Concept #1: Public Donation Market

First, what is a "public donation market"? Social security is defined as the "provision of benefits at public responsibility to support people in danger of losing stability in their lives and to enable them to lead healthy lives without worries" ("First Report of the Committee on the Future of Social Security", Advisory Council on Social Security, 1993), comprising the four pillars of: (1) social insurance (e.g. pensions, medical care, nursing care, employment); (2) public assistance (i.e. protection for daily life); (3) social welfare; and (4) public health. Of these, (1) (social insurance) is a system based on mutual support in which insurance premiums are collected and a predetermined amount is provided in the event of illness or need for nursing care. Pillars (2) through (4), however, are public support systems that are in principle funded by public expenditures (taxes), and under the traditional framework, the government was responsible for maintaining the foundation of social security. With limited financial resources and as infrastructure in regional areas for receiving social security (benefits in kind like medical care and child care) hollow out, however, a new approach that transcends the strict division of roles that has been in place has become necessary to maintain the goal and function of maintaining the foundation of social security.

In other words, a contracting population and low economic growth mean that sufficient financial resources for social security cannot be maintained, while at the same time the risks people face are becoming increasingly complex and complicated, meaning that a system that can flexibly respond to diverse needs is required. I believe that what is important in this situation is to create an environment that promotes the "voluntary provision of public assets". When private citizens – either individually or through various nonprofit organizations – support people who are in need, however, there is a common issue of securing financial and human resources.

There have been discussions about the use of crowdfunding and dormant bank accounts for this purpose, but what I have long advocated is a "public donation market". A public donation market builds on the *furusato nozei* (hometown tax donation) program as a system for the use of those financial resources.

Officially, the *furusato nozei* system (covered primarily by Article 37, Section 2 of the Regional Tax Act) is a type of donation tax system, but there has been a sharp increase in the number of people making donations under this system to receive the special items they receive in return, and recently the program has been criticized because it means that tax revenue for the local government where the person lives and national tax revenue both decrease. The national government's finances are also being strained by the rapid increase in social security expenses and continuous government deficits, and this has begun to create noticeable "gaps" in public services at the national and regional levels. In addition to the national and local governments, public services are also provided by nonprofit organizations and social entrepreneurs, and various types of providers need to be cultivated.

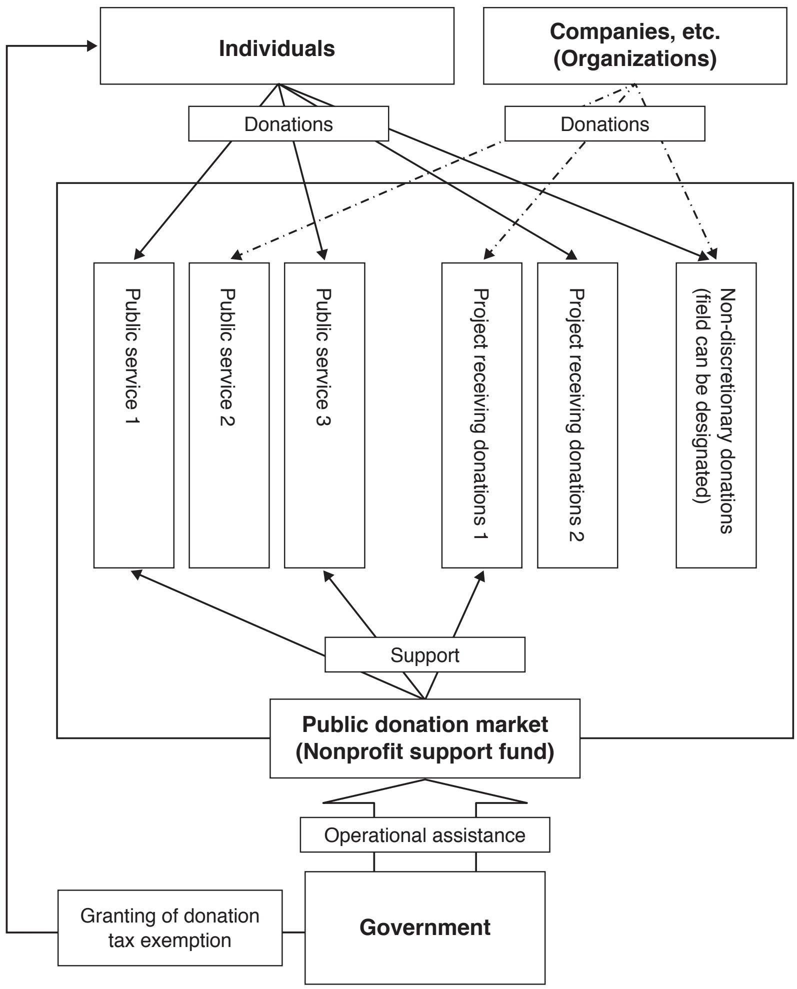
Given this situation, shouldn't the important thing be to abolish the framework of the *furusato nozei* program and expand donation markets that make it possible for regions to provide services that resemble public services but use the resources and expertise of the private sector? What I am proposing is a new concept based on the *furusato nozei* program, but that establishes a "nonprofit support fund" (provisional name) and a "public donation market" (provisional name) that is packaged with a donation tax exemption. Specifically, I would suggest the policies outlined below, referencing a stock market structure *(Chart)*.

First, to even out any asymmetries in information between donors and organizations collecting donations, the new concept would use the Internet in the same way that *furusato nozei* makes full use of the Internet for matching. In other words, a public donation market would be established to match organizations collecting donations (including local governments) and projects that meet "conditions for superior eligibility" (conditions corresponding to the Tokyo Stock Exchange's listing criteria, to screen the organizations' and projects' reliability, details, means and structure for acquiring donations, etc.), making it easy to make donations via the Internet.

Specifically, from the perspective of information transparency, the public donation market would audit and publicly release information regarding the donation-collecting organization's finances, operating structure, objectives, other details, and track record, assign a rating, and strive to identify donors and organizations. At the same time, donors would make non-discretionary donations to organizations and projects based on that information (meaning that although the donor would designate the field of use, in principle other particulars regarding the donation would be made by the party receiving the donation in the public donation market). In addition, to increase efficiency at the micro level, the public donation market would reference the Tokyo Stock Exchange's earnings model and be established as multiple, licensed, private-sector organizations that

CHART

Nonprofit fund / Public donation market



Source: Compiled by the author

maintain certain benefits of preferential treatment and sources of earnings.

In addition, "donation tax exemptions" and "nonprofit support funds" would be established as catalysts to stimulate the donation market. The nonprofit support fund would provide free support in the form of operating the public donation market and screening organizations and projects that meet certain conditions.

When this catalyst proves insufficient, we could also consider a strategy of using a portion of inheritance taxes. The Nomura Institute of Capital Markets Research estimates that the amount of inheritance in Japan today is roughly ¥50 trillion annually, so a 1% additional tax on inheritances would generate financial resources of approximately ¥500 billion. A 2% tax would generate roughly ¥1 trillion. These financial resources could be used as a base from which to expand the public donation market. It would also be desirable for this support to be applied to regular nonprofit organizations and projects, as well as local governments and public services. Fields like childrearing support and nursing care already have structures in place that are able to accept support, with organizations that provide a more diverse range of services than local governments.

For example, the NGO Florence (winner of the Nikkei Social Initiative Award in 2013) is well known for its *Ouchi Hoikuen* service that provides daycare for children up to the age of two with a limit of 19 children per location. Other participants like As Mama, Inc. (winner of the ICT Regional Revitalization Award in 2017), which operates a *Kosodate Share* service where acquaintances can take each other's child to school, pick them up, or look after them for ¥500 per hour, are also appearing. Nonprofit organizations offering new services like these are being set up naturally in response to people's needs, and this would also provide them with an opportunity to grow.

In any case, the above framework would represent an upgrade to the *furosato nozei* program, providing individuals and companies with an opportunity to select directly the organization (including local government) or public service they wish to support, while at the same time the transparency and public release of information by the public donation market would transform the thinking of parties receiving donations, which could be expected to cultivate a higher-quality market for donations.

Concept #2: Cryptocurrency x Voluntary Provision of Public Assets

The second concept is "cryptocurrency x voluntary provision of public assets". Using the new technology known as blockchain, crypto currencies (e.g. Bitcoin) have spread rapidly as technologies have advanced in recent years, and we are beginning to see more attempts to use cryptocurrencies as policy methods to provide market mechanisms for needed public goods and services.

For example, there is a mechanism called "proof of work" (POW) that correlates the voluntary provision of public assets with compensation via cryptocurrency mining. In addition, a platform model like Uber and Airbnb could be used as a framework for efficiently matching people who wish to receive services like child rearing or nursing care with people who want to provide those services.

The background behind this is the expansion of cryptocurrencies to the scale of a global market. The most famous is Bitcoin, which stores the most recent transaction data on a blockchain as a security measure to prevent things like double payment. The person entering the data in transaction needs to supply a computer's calculation capacity, but based on a defined set of rules, under this framework they are able to obtain a certain amount of cryptocurrency as compensation for recording transaction data. The act of entering correct transaction details into the blockchain for the purpose of receiving compensation is called "mining" and in general this framework is called POW.

Bitcoin is compensation that can be obtained through POW, but there are also frameworks for obtaining compensation like Ethereum and Ripple that use different cryptocurrencies. For example, the cryptocurrency Ripple provides a mechanism for obtaining compensation for contributing to things like cancer research or research into new diseases through participation in a team called the World Community Grid. Currently, there are only a few cryptocurrencies that are used for general transactions, but we are starting to see attempts to use blockchain technology where video, music, or other content is submitted to a platform, and based on certain rules the platform issues cryptocurrency as compensation.

In other words, cryptocurrency-related technologies have potential use as compensation for voluntarily providing public assets, and verification testing is gradually beginning for regional cryptocurrencies using blockchain technology in Japan. For example, as part of a regional revitalization platform concept, Kama Co., Ltd., based in Kama city, Fukuoka Prefecture, in cooperation with NTT Data Corporation, began verification testing of a blockchain-based regional currency on April 1, 2018. In addition, as a joint development project with the app developer iRidge, Inc., Gifu Prefecture's Hida Credit Union began verification testing of Sarubobo Coin, a digital regional currency for a limited geographical area, in December 2017. In Hawaii, the Aloha-coin is being issued to promote regional revitalization. There are other frameworks overseas as well where blockchain technology is being used as a platform that issues cryptocurrency as compensation for a defined action based on predetermined rules.

These types of initiatives contain mechanisms that spontaneously create private-sector-led "connections" and this is very important. In *Voluntary Provision of Public Goods and Cryptocurrency* (RIETI Discussion Paper Series 18-E-081, 2018), Kazumasa Oguro, Ryo Ishida and Masaya Yasuoka theoretically analyze the possibilities for a POW mechanism that correlates voluntarily providing public assets and mining cryptocurrency as compensation as a useful way to resolve the "free rider problem" with regard to public assets. The results of that analysis show the following:

(1) When each individual honestly reports their own preferences,

it is theoretically possible that the Samuelson condition for optimal private provision of public goods can be met through the voluntary provision of public assets by appropriately setting the mining compensation.

(2) Because implementing the framework (mechanism) we propose, under certain conditions, will encourage rational individuals to report their true preferences to the government, it is theoretically possible to provide public assets at the Pareto Optimum, the best allocation of resources level.

John Morgan proposes the novel mechanism of using a lottery for the voluntary provision of public assets ("Financing Public Goods by Means of Lotteries", *The Review of Economic Studies*, Vol. 67 (4), 2000). A portion of the lottery sales would be used for prize money, with the remainder used to provide public assets. When public assets are voluntarily provided, the lottery prize money would be compensation that can be received at a set probability. This has the essential problem of the amount of public assets provided not reaching the Pareto Optimum level unless there is a huge amount of prize money, but nevertheless the mechanism of using lottery prize money to promote the voluntary provision of public assets is a very interesting concept, even when compared with cryptocurrency.

In *The Natural Economic Order* (1916), the economist Silvio Gesell introduced the groundbreaking concept of "money that loses value". Ordinary products become obsolete and lose value over time, but to the extent that prices remain stable, money does not lose value. This puts money is a special position as a means of accumulating savings. Gesell proposed the concept of "freely fluctuating money" or money that loses value, so that money would lose value over time as a way to abolish this special position and separate the roles of being a method for exchange and a method for accumulating savings.

Issuing digital currency or electronic money was technologically impossible in Gesell's time, but today it is easy to issue digital currency and it is possible for a framework to have the feature of losing value within a designated period of time. In addition, because the main benefit of Gesell's money was that the amount of currency issued would lose value, issuing only the amount of additional currency to offset that loss in value would prevent inflationary pressure. Therefore, if a framework could be built in which a reasonable volume of currency circulates within a geographic area, additional amounts could be issued at designated times as financial resources for various projects.

Conclusion

Governments build systems of regulations and structures to regulate with an emphasis on growth and distribution, but uniform, rigid systems cannot respond to environmental changes. The most important element in emphasizing growth and distribution is to be able to promote growth while flexibly responding to those changes when they occur, and to identify quickly and accurately which people actually require assistance. What then, does a system that can distribute goods to those people in a concentrated way look like?

From this perspective, I believe the important things to emphasize are "'public' – meaning created by everyone" and "new communities created by diversity and connections". The important thing about diversity is that each individual human being is different, and having diverse ideas allows people to engage in different activities, which can make an even greater contribution to society. Even when dealing with people whose ways of thinking are significantly different from our own, being individually open-minded and respecting their individuality will have a definite effect on the breadth and depth of diversity. The higher the level of diversity in the overall social portfolio, the better able it is to deal with environmental changes flexibly and swiftly. Diversity creates "connections" (new combinations) including resources and knowledge, and increases the likelihood of triggering new innovation.

The most important functions of the overall social portfolio are social insurance that diversifies risks and support for daily life. Support for daily life is a system that addresses citizens who – despite using all of their assets and capabilities – struggle in their daily lives, as measured by meeting defined conditions and based on a basic policy of impartiality and non-discrimination, and provides protection in proportion to the degree of need, to guarantee that they can live at a minimum level of health and culture. In addition, social insurance is a type of compulsory insurance in which people who meet certain conditions are required to participate, to prepare for risks including illness, old age, unemployment, and the need for nursing care. Under this framework, (a portion of) the expenses incurred by an insured event are provided from insurance premiums paid in advance.

Naturally, this type of portfolio cannot address all of the risks present in society. With rapid environmental changes, risks are increasing while also becoming more complex and complicated. We therefore cannot look only at conventional risks; we need a system that can address new risks flexibly and quickly. The important component of this is to have a system for redistribution. The term "redistribution" tends to bring to mind government policies that collect taxes and other levies from some people and transfer them to other people, but private-sector-led donation and philanthropic activities are also forms of redistribution. Activities like donation and philanthropy equate to the "voluntary provision of public assets" and the provision of public services is not solely carried out by government bodies. To maintain the purpose and role of social security, a new approach is needed that transcends the fixed division of roles that has been the norm to date, and is why we need to rebuild communities from a perspective of "'public' – meaning created by everyone". JS

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