



www.ijccr.org · ISSN: 1325-9547

---

Nishibe, M. (2018). Understanding the diversity of CCs worldwide in globalisation and deindustrialisation as an evolutionary tree diagram? *International Journal of Community Currency Research* 22(1), 16-36. <https://doi.org/10.15133/j.ijccr.2018.003>

This article is published under a *Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International* (CC BY-NC-SA): <https://creativecommons.org/licenses/by-nc-sa/4.0>



© The Author(s), 2018



# International Journal of Community Currency Research

2018 VOLUME 22 (WINTER) 16-36

## UNDERSTANDING THE DIVERSITY OF CCS WORLD-WIDE IN GLOBALIZATION AND DEINDUSTRIALIZATION AS AN EVOLUTIONARY TREE DIAGRAM

Makoto Nishibe\*

\* Senshu University, School of Economics - Email: nishibe@isc.senshu-u.ac.jp

### ABSTRACT

The main purpose of the paper is to explain why vast diversity of community currencies (CCs) arise both within "developed countries" and between "developed" and "developing" countries, and to provide an evolutionary tree diagram, rather than taxonomy, of CCs that continue to vary in globalization and deindustrialization as two long-term socioeconomic tendencies since the 1970s. To accomplish the end, we explain that globalization and deindustrialization in modern capitalist economy caused various economic, social and cultural problems and CCs were introduced to solve the problems caused by the tendencies, and that such diversity of the problems brought about the diversity of CCs as solutions for them, and we presume that, according to 'reality oriented categorization,' such diversity of CCs is described in a tree diagram with such two underling dimensions corresponding to the two socioeconomic tendencies as: x) economic and/or social-cultural media as two basic components of CCs in globalization and y) primary and secondary and/or tertiary industry regarding deindustrialization. Thus the initial archetype of the tree diagram is identified as "industrializing- economic/complementary" CCs seen in the past developed countries and the present developing countries that evolved into three branches of CCs ("industrializing-local/territorial", "deindustrializing-cultural/community" and "deindustrializing-economic/complementary"). Finally, we take up Banco Palmas in Brazil to examine if it can be regarded as the typical case of an industrializing-economic/complementary CC in developing countries in the tree diagram of CCs and suggest implications for CCs in the future

### KEYWORDS

Community Currencies, Globalization, Deindustrialization, Diversity, Taxonomy, Tree Diagram

## 1. INTRODUCTION

Modern community currencies (CCs) emerged in the 1980s in some “developed countries” and were widespread over many “developed countries” and “developing countries” in the 1990s. A wide variety of CCs in terms of the objectives and the forms are currently observed, both within developed countries, and between developed and developing countries. Why is there such a huge diversity of CCs worldwide?

Since CCs evolved as counteracting movements to a variety of problems resulting from interactions between such socioeconomic institutions as money, market, community and government, and such socioeconomic environments as GDP, living standard, technology and knowledge, how CCs exist largely depends on the states of such institutions and environments.

If we lived in a globally coherent and static state of environment, the observed varieties of institutions would be only temporal or transitional in the initial phase of developments, and they would disappear over a considerable time. Then various institutions would be expected to eventually converge to the global standard, the fittest model to a globally coherent and static environment. If it is so in the case of money, the global single currency would emerge, diversity of moneys would disappear, and such a minor species as CC would lead to extinction.

However, such a view on institution and environment is too simply uniform and static to understand this complex and evolutionary world where many species of institutions continuously coexist in locally incoherent and temporally changeable environments. Until when the pluralistic and dynamic nature of reality is taken into account, we cannot understand vast diversity of CCs reflect locally incoherent and dynamic institutions and environments. As long as socioeconomic institutions and environments continue to vary worldwide, such diversity of CCs rather become persistent depending on the nature of coevolution where socioeconomic institutions and environments mutually affect.

Before tackling the key issue on such diversity of CCs, we will examine what kinds of tendencies arise in socioeconomic institutions and environments when CCs reemerged in the modern world and consider how they affect the kinds of CCs in the developed and developing countries during the past several decades.

## 2. GLOBALIZATION AND DEINDUSTRIALIZATION: TWO MAIN LONG-TERM TRENDS UNDERLYING COMPLICATED PHENOMENA

After the so-called ‘golden age’ of capitalism in the 1950s and 60s, developed countries have enjoyed long life expectancy and high standard of living due to completion of economic development through industrialization. People in those countries are now facing with the drastic change of quality of life in environmental conscious super-aging society, i.e., transformation of substance/material-centric happiness into relation/information-centric one. Nevertheless, developed countries had severely suffered from unemployment and economic disparity formed during repetitive financial crises and prolonged economic depressions. They also have been experiencing the demise of communities such as families and neighborhoods and the decay of local economy. It is what market penetration brought about in globalization of capitalist economy. There are thus two main reasons why the people seek CCs in developed countries: to revitalize various types of communities and/or to encourage local economies. This division creates diversity of CCs in those countries.

On the other hand, developing countries have not yet reached the stage of situations and problems found in developed countries. They are at present struggling to realize economic development and poverty eradication through industrialization, while the senses of community in families and neighborhoods are still strong enough to antagonize market penetration in globalization. Accordingly, they need to have the CCs (sometimes combined with microcredit scheme as in Palmas Bank) mainly to accomplish such goals as described above. National economic and social environments in developing countries are thus different from those in developed countries even in the same global economic age today. This eventually leads to a big difference of CCs between developing countries and developed ones. It is thus clear that CCs as institutions cannot be evaluated independently of socioeconomic environments as their backgrounds in which people are located. We need to conduct CC activities and experiments seriously considering such evolutionary perspective. For example, the successful ideas and schemes of

CCs in one nation/ region cannot be easily transferred to somewhere else in different socioeconomic environments.

After the 1990s, asset bubble collapse and financial crisis, especially banking crisis, had been repeated worldwide. In the early 1990s in Japan, the stock and land price plunged and Heisei bubble burst and three major banks with enormous bad loans bankrupted. It made serious impacts on the real economy of Japan. Because consumption and investment had been reduced due to the negative wealth effect and the corporate earnings deterioration, aggregate demand shrinkage and general price decline mutually intensified, which resulted in deflationary spiral. The number of non-regular employees has increased through rationalization by corporations and income and asset disparities among regions and individuals have widened in the 20-year prolonged recession called the 'lost two decades'. But, the fiscal and monetary policy for economic recovery was hardly successful, or the effect of such symptomatic treatment was at best temporary. In order to consider the cause of occurrence of these problems since the 1990s, we need to trace back to the 1970s.

Since the mid-1970s in the US and Europe, slightly late in the 1980s in Japan, such a series of neoliberal economic policies as liberalization, deregulation and structural reform have been actively adopted. They caused the real and financial economy to be unstable through collapse of asset bubble and successive financial crises. It resulted in the increasing unemployment rate and economic gap between the rich and the poor. Fiscal and monetary policy had been repeatedly conducted in order to deal with these problems during the 'two lost decades' in Japan. It was an attempt to correct defects of liberalization and deregulation, assuming those policies to be basically correct. This is true of many developing countries including Brazil and Argentina in South America as well as developed countries. The theory of "neoliberal cycles" (Alcorta 2009, Sano, 2012, 2013) explains 10-year medium-term business cycles as being formed by neoliberal interests, ideas and policy. The argument emphasizes that policies and ideas determine the economy, contrary to historical materialism insisting that the economic substructure determines the political and ideological superstructure.

It is undeniable that such medium-term business cycles exist and political interests and economic thoughts affect the cycles through economic policies and institutions, but we attach greater importance to the effects of long-term trend of globalization and deindustrialization as the economic background just because we are interested in diversification of CCs as long-term tendencies in evolution. The remarkable economic development of BRICS since the late 1990s after the breakdown of socialist economic regime clearly showed that, even if subordinate and dependent relations between developed and developing countries used to exist as 'the dependency theory' once described (Frank 1967, 1969), they are not fixed structures that last perpetually. Seen from the long-term trend of economic growth, the developed countries have already passed industrialization in the 1970s to 80s and subsequently transformed their industrial structure and demand trend for service and knowledge-based economy long before the developing countries. This is why there exists the great disparity in the current economic situation between the developed and developing countries that both have been placed under similar neoliberal cycles. Such different positions on the long-term trend of economic development, not any inherent cultural and national identities, are more likely to produce the difference of the characteristics and acceptance of CCs between developed and developing countries.

The present paper provides the summary of how to describe economic globalization as a particular phase of evolution of capitalist economy as follows (Nishibe 2011, 2015). There are three basic and coexisting institutions for economic coordination in any socioeconomy: 1) Market (a private principle for free exchange), 2) State (a public principle for equal redistribution) and 3) Community (a common principle for fraternal reciprocity) (Polanyi 1944, 1957). Socioeconomy has been maintained and reproduced by forming a mixture of those three principles. Market economy is the socioeconomic system where agents buy and sell major goods and services as commodities by means of money. Its main principle is Market although State and Community are partially and constantly at work. From the perspective of socioeconomic evolution, markets emerge between communities and/or empires (states), gradually expand and finally penetrate to the interior of those (Marx 1970, 1976). Such a tendency might be called "internalization of Market," which keep functioning in capitalist economy despite being normally invisible and temporarily hindered or often constrained by the other principles, State and Community.

Capitalist market economy is a particular type of market economy historically established in the 19th century UK, and integrated all substantive aspects of socioeconomy and spread through the whole world. Capitalist market economy is described as the economy where industrial capitals as commercial enterprises make profits through producing almost all goods and services by employing labour-power and utilizing means of production, and selling them as commodities. Therefore, Market is the most fundamental principle for organizing socioeconomy in it, but the other principles such as State and Community complementarily functioned as “safety nets” to cover the weak points of the market because the market is solely unable to deal with such “fictitious commodities” as money, land and labour that are not originally produced and traded as commodities (Polanyi 1944). Capitalist market economy is theoretically defined as the combination of ‘general commodification’ (profit-purpose production in market) of general goods and ‘external commodification’ (fictitious commodification outside communities and states) of labour-power through “internalization of Market” (Nishibe 2015).

Thus we depict globalization after the 1970s as the self-manifesting tendency of “internalization of Market” in capitalist market economy where Market gradually replaced State and Community as Market expanded and State and Community reduced (Fig.1). Under a global capitalist economy, not only ‘extensive expansion’ but also ‘intensive deepening’ of Market proceeds. In the former, the market becomes wider geographically or spatially, but in the latter, Market penetrates deeper into us because all sorts of intangibles including knowledge, information, claim and risk besides material things increasingly become commodified.

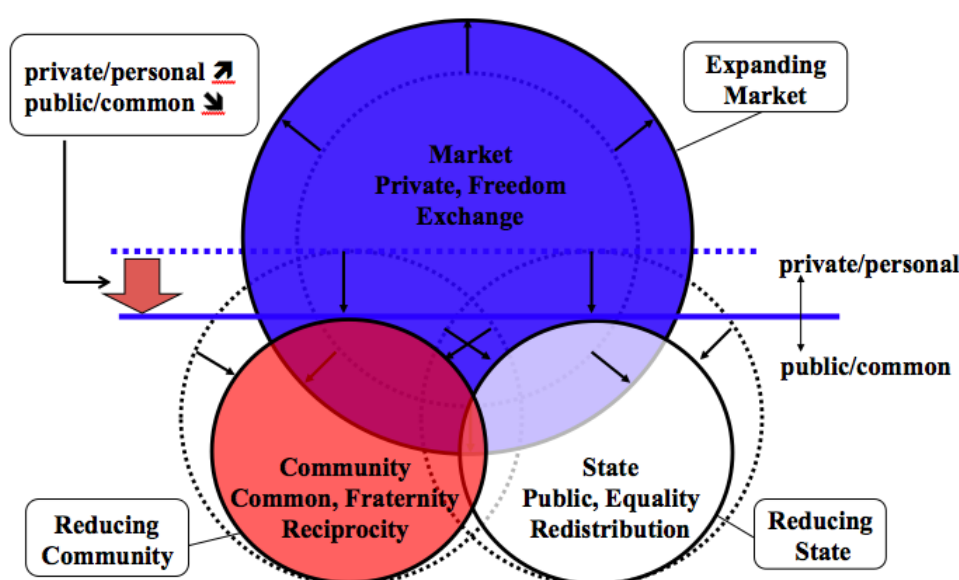


Fig.1 Globalization

Capitalist market economy, on the one hand, is apt to replace State and Community with Market and, on the other, utilizes laws and conventions as safety nets to prevent fictitious commodities such as labour, land and money from breaking down. It has the universal nature not only to turn any materials, information, services as well as labour-power into ‘fictitious commodities’ for sale but to deal with a bundle of such claims as bonds, stocks, real estates, derivatives, naming rights and even ‘human capital’ that is another name of human ability of gaining income based on utilizing embodied knowledge and skills as ‘fictitious capital’ (Marx 1981) for profit opportunities. If the long-term tendency of globalization as manifestation of ‘internalization of Market’ were to be extended to the future, an ideal type of capitalist market economy that consists of only Market excluding State and Community would be found.

The ultimate model of globalization is thus “free investment capitalism” where all human behaviors and choices are regarded as investment and ‘fictitious capital’ is ubiquitous. The diffusion of such ethos forces people to pursue efficiency, convenience and pleasure beside money income and expels cooperation and altruism (including selfishness in the broad sense) involved in reciprocity and mutual aids in a community like a family and a neighborhood. The tendency of ‘internalization of Market’ fundamentally causes a variety of socioeconomic phenomena such as decline of norms and ethics, demise of traditions and customs, and loss of safety and security. Thus long-term self-organization of capitalism is the underlying socioeconomic principles deep under mid-term economic cycles and neoliberal policies and ideology are merely its facial reflection.

Deindustrialization is a tendency universally observed in developed countries since the 1970s to shift the center of the industrial structure from secondary (manufacturing) industry to tertiary (other) industry at both sides of added value and employment (Fig.2). Deindustrialization is explained as a composite outcome of the two distinct technological trends: informatization and servitization (Nishibe 2014). It is conventionally accepted that the cause of deindustrialization lies in the demand decrease (caused by demand saturation) and improved productivity of the industrial products (Rowthorn 1987). But “qualitative transformation” of human desire and needs like Maslow’s hierarchy of basic needs (Maslow 1943, 1954) on the course of economic growth is taken as another crucial factor. As developed countries succeeded in accomplishment of industrialization and improvement of living standards, people had begun to seek qualitative improvement of their necessities and various luxury goods rather than quantitative affluence of necessities.

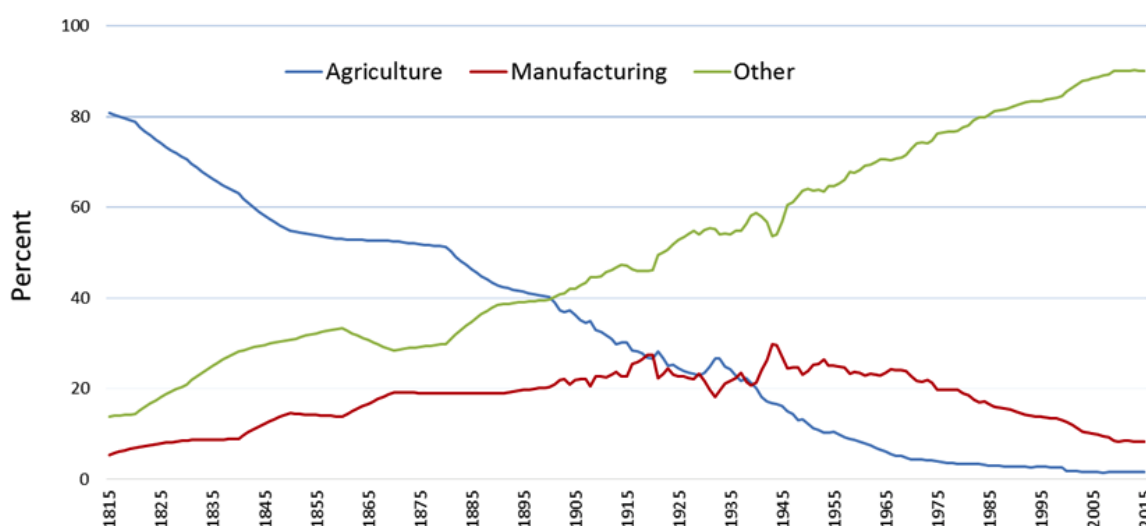


Fig.2 US employment shares by sector (1815-2015)

And the way of our desire and subjective happiness becomes highly advanced and diversified, and the center of affluence shifts from industrial products (materials) such as the cars, electrical appliances and house to such knowledge-based and service-oriented things (situations/ relations) as health, trust, social bonds, mental tranquility, natural environments. Consequently, we have come to make much of information (science, technology, skills, techniques, software, data) and service (law, finance, education, medical service and human care). In short, deindustrialization can be interpreted as such a phenomena that the concept of richness for people reaches a higher dimension and becomes diversified once the material richness was realized to some extent through industrialization, and information and service thus relatively gained more significance and value than before.

We have recently seen the several signs that indicate the aforementioned points. In developed countries, much attention has been attracted to such new well-being indicators as Human Development Index (HDI) (UNDP 1990, Haq 1995, Sen 1992, 1999), Gross National Happiness (GNH) (Bakshi 2005, Kusago et al 2011, Ura et al 2012) and many others (Stiglitz, Sen, Fitoussi 2010) for alternatives to GDP per capita in order to multi-dimensionally measure people’s living conditions and societal progress. Easterlin had already pointed out that people’s subjective happiness was declining despite of increasing GDP per capita (Easterlin 1974). Such a happiness-income paradox

has been widely observed in the developed countries, e.g. both in US and Japan (Fig.3). Furthermore, as globalization proceeds, the information and service that had not been produced for profit have become commodities for sale, and the increase of added value in GDP through globalization would have amplified deindustrialization, while the world center of industrial production shifted from developed countries to NICs in the 1970-80s and BRICS in the 2000-10s.

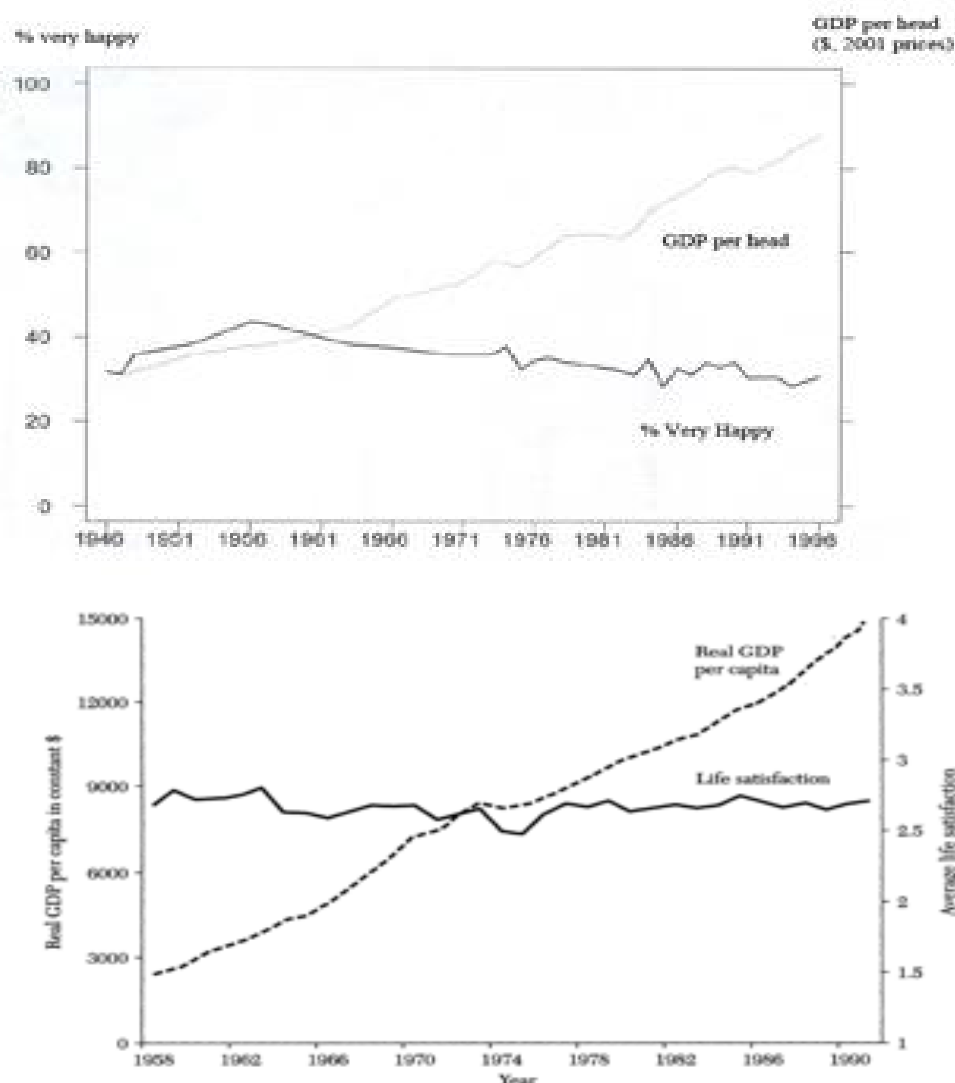


Fig.3 GDP per capita and life satisfaction in US (above) and Japan (below)

### 3. COMMUNITY CURRENCIES AS INTEGRATIVE COMMUNICATION MEDIA OF MONEY AND LANGUAGE

As we have just seen, globalization involving expansion and deepening of Market as well as reduction and shallowing of State and Community has led to severe problems with regard to society, culture and environments. The present institutions of money in capitalist market economy are national/regional currencies or central banknotes as US Dollar, Euro and Japanese Yen, out of which US dollar is a global key currency. Hayek criticized such problems as excess issue and artificial inflation caused by national monopoly of money, and proposed denationalization of money involving concurrent currencies as desirable institutional design for 'good money' (Hayek 1976). Nevertheless, Euro as banknotes and coins started in 2002 as a regional unification of European national currencies completely opposite to Hayek's insistence and its basic idea has been widely accepted although enormous public financial deficit of PIIGS, especially Greek, have recently caused Euro a serious trouble. Bitcoin was initiated in 2009 and propagated during the Cyprus crisis and more than a thousand of such crypto currencies have ap-

peared as “Altcoins” (Nishibe 2016). In the 1980s, people of developed countries had begun to take initiatives, by inventing and introducing many kinds of variants of social and private money, to vitalize local communities and economies against neo-liberalism and globalization. CCs eventually produced a new possibility of changing the nature and concept of money. We conceived them as ‘integrative communication media,’ equipped with both sides of economic media as money and social/cultural media as language, designed to activate local economy and community by restricting its usage within certain local areas in order to encourage local circulation of energy and material for a sustainable and recycling local economy of ‘local production for local consumption’ (Table 1)<sup>1</sup> (Hart 1986, Nishibe 2012).

Sides	Money (Economic media)	Language (Social and cultural media)
Purposes	Vitalization of local economy (Autonomy, circulation, recycling)	Rehabilitation of community (Dialogue, interchange, commitment)
Functions	Independent design, issuing and administration Bounded sphere of circulation Zero or minus interest	Ferment of trust and reciprocity Cooperative ‘prosumers’ Linguistic expression and transmission
Forms	Complementary currencies and Emergency currencies (Stamp scrip, LETS)	Mutual-help coupons (Time Dollars, TimeBanks, Eco-money)
Domains	Market/ Exchange	Community/ Reciprocity

**Table 1 CCs as Integrative Communication Media**

Although CCs have a great variety as to purposes, functions and forms, they can be simply identified by taking note of the mixture rate of the money side to the language side in CCs. This is because the mixture rate expresses the present states of such institutions as markets and communities and, at the same time, the aims and functions of CCs. In cases of stamp scrip in North America and urgent currency and WIR in Europe in the 1930s and CC coupons (CCs in the form of redeemable coupons) in Japan in the 2000s, they mainly target for promoting commerce and trade in local shopping street and local economy. Then the money side is stronger than the language side in such CCs, so they should be called ‘business activating type’. On the other hand, in case of Time Dollar in North America, Time Banking in UK and ‘Fureai Kippu’ (the time deposit type of CC) and Eco-money in Japan, they aim at encouraging volunteer work and mutual help and strengthening human connections within communities. The language side is much stronger than the money side in such CCs, so they should be called ‘volunteer activating type’. The former is used both for commercial trade of goods and services in the market and non-commercial trades of those in the non-market (community), but the latter is exclusively used for non-commercial services (volunteer work and mutual help) in the non-market (community). Many CCs like LETS are located in between them. However different the mixing rate of both sides is according to the current situations, all CCs are the same as the institutions designed for combining businesses motivated by selfish profit in Market and volunteers motivated by altruism or reciprocity in Community. This is why we call CCs integrative communication media. The

<sup>1</sup> Hart (1986) pioneered to pay attention to the two sides of the coin. He suggested that *any money* is both an economic media and a symbol of a political community.



purposes and functions of CCs are as follows: a) to aim at mutual aid and reciprocal exchange with the money that can be used only locally, b) to solve the deflation and unemployment problem by building up an autonomous growth of the healthy local economy through circulation within the limited local region, c) to prevent excess credit creation and speculation from resulting in financial instability and activate local trades of goods and services with zero or negative interest rate, d) to evaluate non-market services for personal welfare and care from a variety of viewpoints, e) to present philosophical grounds to associate various activities related to labour, consumption, welfare and environments of NGOs and NPOs, and f) to build “trust” among people and turn monistic cash nexus into more diverse and rich communications. Here, it is easy to see that a) to c) are economic and d) to f) are social and cultural purposes and functions.

In contrast to such top-down solutions as monetary and fiscal policies of central banks/governments in order to overcome economic depressions, CCs try to give the bottom-up solutions to such various problems as decline of local economy, collapse of community, declining birthrate and aging, and destruction of natural environments. They take the forms of grass-root movements or community businesses and are designed and operated by citizens and organizations (neighborhood associations, shopping district, Chamber of Commerce, municipalities, cooperatives, NPO, etc.). CCs do not mediate public welfare and social insurance services because they are not official institutions like national currencies but informal institutions and policies to promote the mutual aid and reciprocity by the community. They are created and spread through the non-profit activities of people.

According to the survey on 464 CCs in Japan conducted in 2008, the actual purposes (number, %) of CCs are found as follows (Kimura 2008). 1) Vitalization of local community (296, 63.8%), 2) activation of local economy (89, 20.7%), 3) solution for environmental issues such as garbage and recycling (48, 11.2%), 4) local production for local consumption especially agriculture (18, 4.2%), 5) preservation of woodlands and forestry (14, 3.3%), and 6) the others including (65, 15.1%). Because multiple answers are permitted for this question and the summation of the number (530) is bigger than the total number (464), although there are many small CCs included, some portion of them have two purposes and more as we assume CCs as integrative communication media. We understand that the side of social and cultural media in CCs in Japan is far more significant than that of economic media from the observation that the percentage of ‘vitalization of community’ is more than three times of that of ‘activation of local economy.’ This would be more or less true of other developed countries. The prehistory of the community currency dates back to the labor money of Robert Owen and Owenite or Ricardian socialists in the 1820-30s, the People's Bank of Proudhon in the 1840s and the stamp currency of Gesell and Fisher in the 1920-30s (Nishibe 2006). The labor money of Owen and others aimed at people's obtainment of right to the whole produce of labor based on the labor theory of value claiming that value of a commodity is determined by the amount of embodied labour to produce it. The People's Bank of Proudhon provides free credit for the purpose of correcting inequity of exchange. Silvio Gesell's stamp currency promotes consumption and investment by imposing demurrage, i.e. minus interest for hoarding money so that money will depreciate as time just like general goods and creating the incentive to pay it as early as possible (Gesell 1958).

Until the first half of the 1970s, both socialist planned economies and effective demand management policies have strengthened the state's intervention in the market. As we have already seen, ever since till now, economic globalization and deindustrialization have characterized the socioeconomy. Not only market economy spread globally but also what has not been traded with the money as services (child care and nursing care in the family, etc.), information (software, personal information etc.) and right (naming rights, carbon-emission rights, futures and option) has been commercialized.

As globalization as the tendency of Market to rapidly expand and deepen and of State and Community to reduce and shallow proceeds, we encounter not only economic problems such as financial instability and chronic recession with unemployment have occurred, but also social issues such as declining birthrates and aging, dissolution of communities in locality, neighborhood and family, and global environmental issues such as global warming by greenhouse gases (carbon dioxide and water vapor) and air pollution by PM 2.5. Modern CCs emerged all over the world as attempts or movements to give solutions to these issues and to regain sustainability of our socioeconomy.

Globalization has clearly divided interconnected socioeconomy into the money tradable economic domain and the non-money tradable socio-cultural domain and thereafter expanded the former as Market and reduced the latter

as State and Community. Various problems above described occurred as a result of such bipolar separation and prosperity/adversity of two domains in globalization. As the market principle on exchange has become dominant and, on the other, the state principle on redistribution and the community principles on reciprocity have diminished, selfish business of profit seeking has become bloated in the economy domain, and altruistic volunteer of free service has been highly praised in socio-cultural domain. In short, globalization has created the double Trinity as <market = economic = business> and <community/state = socio-cultural= volunteer>. However, unlike community-based reciprocity and mutual help, unilateral gratuitous volunteer activities in socio-cultural domain promoted by globalization do not last long but, furthermore, may do harm to self-esteem of recipients when they feel themselves incompetent as they cannot return anything. If we understand CCs as integrative communication media to counter globalization, they should encourage people to do mutual help as members of communities rather than to do graceful gratuitous act as independent individuals. CCs would therefore become practical movements that intended to integrate double Trinity of the economic and socio-cultural domains and to realize a sustainable reciprocal exchange system.

#### **4. DIFFERENCE BETWEEN DEVELOPED AND DEVELOPING COUNTRIES, DIVERSIFICATION OF CCS DUE TO GLOBALIZATION AND DEINDUSTRIALIZATION**

CCs spread worldwide rapidly in the 1990s. The number of CCs in the world was estimated to reach 4,000 (Lietaer, Dunne 2013) and that of Japan was counted 259 in December 2008 (Izumi 2013) and 662 in January 2011 (Tokutome 2011). In Japan, several volunteer citizen groups initiated CCs in the late 1990s, then local governments, Chambers of Commerce, Societies of Commerce and Industry and private corporations had gradually joined as partners or promoters of CCs, and many NPOs were established mainly for management and administration of CCs.

Since 2003, the national government had launched a succession of policies to promote and support CCs such as provision of computer network systems, approval and establishment of special zones for CCs and subsequent nationwide deployment of such deregulation zones. In those zones, local gift certificate (CC coupon hereafter) was permitted by the central government to circulate multiple times like currency. And such an invention as to achieve the same effect as CCs by using local gift certificate was widespread across the country. It actually meant removal of the conventional condition of CCs such that they are non-redeemable with legal tenders. Although the volume of circulation of CCs has increased rapidly in the course of the trial and error because they underwent the support measures of central government, many of them are only short-term experiments, not long-lasting.

CCs can be regarded as species of money institution in evolution with many types of variations different from the conventional ones that struggle to exist in trial and error in ever changing environmental conditions. So a population of CCs that could manage to fit to such changed environments would only survive and prosper. Existence of CCs as institutions depends on the change of environmental conditions as other institutions that consist both of the external rules of capitalist market economy as the currently dominant socioeconomic system and of the internal rules of behavior, values and motivation of human beings who keep living in the external institutions. Truly, as far as the short terms are concerned, CCs are subject to the local environmental conditions such as the situations of local communities where CCs are implemented and to the value and norms of the people living in them. But it should be recognized that such local conditions are also largely determined in the longer terms by global conditions if the local systems are open to outside of it. On the other hand, local environmental conditions can gradually vary depending on the impacts of activities of human agents through CCs.

In other words, agents and local institutions reproduce themselves and affect each other to change through mutual interactions between them under the long-term change of external environments including global institutions. In such an evolutionary process, CCs not only be selected out by severe conditions of environments, but they might have a chance to change the existing environments and produce the new one. Even the same scheme of CC may or may not survive according to the difference of the conditions of environments and agents. Therefore, we cannot define fitness or adaptability of each CC independently of such conditions and it would be wrong to seek the cause of failure of CCs in themselves and misleading to try to indicate the best scheme of CC with reference to the best performance practice.

In the environmental conditions where national currencies and the market principle show propagating powers in globalization of capitalist economies, CCs based on the reciprocity principle cannot easily spread. The biggest challenge of CCs is how to make them viable in the long run in such severe conditions. The important key for it is how to induce the states of a local community as well as the norms and values of local residents to make initial moves large enough to exceed the thresholds for triggering dynamically accumulative process in order to change the whole evolutionary system<sup>2</sup>.

But this is not an easy task for both researchers and practitioners of CCs appropriately to trigger positive feedback process to operate. In that sense, there is much to learn on how to make an initial turn of local environments in currency innovation from many cases in completely different environments. We will see the case of Banco Palmas from such a viewpoint later on.

CCs have been widely practiced in developed countries and developing countries like Latin America. While the prime purpose of CCs observed in developed countries is to vitalize local community as in Time Dollars or Time-banks in North America, Time Banking in Europe and Eco-money in Japan, that of CCs observed in developing countries is to activate local economy as in Red Global de Trueque in Argentina, Banco Palmas in Brazil and UDIS in Ecuador and El Salvador (Primavera 2013, Kinoshita, Hayashi 2014). Why do we have such a big difference as to CCs between the developed and the developing countries?

Fig. 2 describes how diversification of CCs develops in the two-dimensional plane whose horizontal axis represents the relative frequency of “money (market)” and “language (community)” as two aspect of CCs, and whose vertical axis represents that of “primary and secondary industry” and “tertiary industry” in the socioeconomy in which CCs are located. If CCs lie at the origin, it indicates that both aspects are well balanced in the CCs. If CCs lie in the positive area, it means that the money aspect is stronger than the language aspect in the CCs. As CCs move to the positive direction from the origin along the horizontal axis, the aspect of money is relatively higher than that of language, but as long as they do not reach infinity, the aspect of language won’t disappear. Conversely, as CCs move to the negative direction from the origin, the aspect of language is relatively higher than that of money, but the money aspect does not become zero unless the CCs stay within a finite area. The same applies to the vertical line.

CCs emerged in the first quadrant on the upper right where CCs are complementary currencies for revitalizing the local economy to escape from the financial crisis and the great depression in an industrialization age. The historical transition from WIR (in the initial form of mutual credit system), Urgent Currency and Stamp Scrip in the developed countries in the 1930s to RGT, UDIS and Banco Palmas of the current developing countries is drawn as a big arrow in the same first quadrant. So the distance between CCs in the previous developed countries and those in the developing countries at present is comparatively short.

However, there is a big gap as to the socioeconomic conditions between the current developed countries and the current developing countries. The current developed countries have already completed industrialization and economic development, and reached globalization under deindustrialization after achieving high standard of living. Since globalization has brought about decline of local economy and resolution of local community, neighborhood, school and even family, both CCs for activating the local economy and those for revitalizing the local community can coexist.

---

<sup>2</sup> In the previous article, we have shown how to make it easier to happen in the community. It is called ‘community dock’ that is the comprehensive method of self-estimation for the community composed of various local agents, through which the community experiences self-awareness and self-alternation of its own environmental conditions (Kusago, Nishibe 2013).

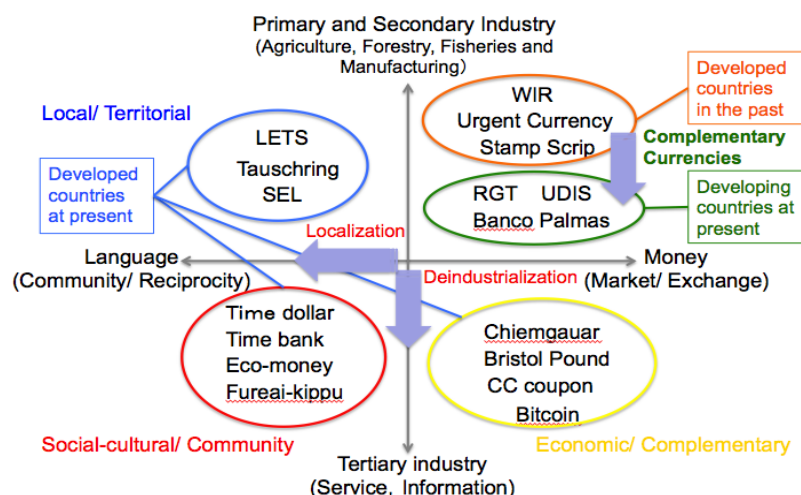


Fig. 4 - Diversification of CCs

The reason why such community revitalization types of CCs as Eco-money have grown in a cluster in a super-aging society as Japan was because there had been quite a strong demand for volunteer work (proxy shopping, snow shoveling etc.) and mental care (someone to talk with) for elderly people that cannot be covered by public welfare services because of budget deficit problems. Deindustrialization of the economy has made service and information industry more significant than agriculture, forestry and fisheries as well as manufacturing industry. Secondly, once basic needs for necessities are satisfied, human desires have highly advanced and subjective happiness has diversified. People have become more strongly aware of global environments, health and social trust and bonds. In this way, the CCs of developed countries split into three groups that are located in the second, third and fourth quadrant divided by the horizontal axis of globalization/ localization or Market/ Community and the vertical axis of industrialization/ deindustrialization or Primary and Secondary industry/ Tertiary industry. These are industrializing local in the second quadrant, deindustrializing social-cultural in the third quadrant and deindustrializing economic in the fourth quadrant. A blue, red and yellow circle respectively surrounds each of them.

Quite interestingly, the taxonomy thus obtained exactly corresponds to the taxonomy of Local/ Territorial, Social/ Community and Economic/ Complementary that Blanc (2011) presented. Martignoni (2012) proposed a four-dimensional (purpose, trust, creation, circulation) taxonomy that gives us 'practice oriented categorization' with more subtlety. But it doesn't refer to real tendencies or changes in external socioeconomic environments. In that sense, Blanc's taxonomy is much simpler but substantively superior because it grasped 'reality oriented categorization' of CCs. Yet since such taxonomy of CC is still statically formed like a snapshot, it does not explain how CCs evolved and diversified as are currently observed.

By way of Fig.4, we finally reach a tree diagram of CCs that represents an evolutionary and dynamic course of diversification of CCs with modern trifurcation (Fig.5). Now it can be understood that the two long-term tendencies in socioeconomic environments exist as the real causes that generate such diversification of CCs and therefore explain why and how diversification of CCs arises in response to actual issues and people's needs/wants in a certain time and space of locally incoherent and temporally changeable environments. Accordingly, it is possible for us to explain what is going on in developing countries.

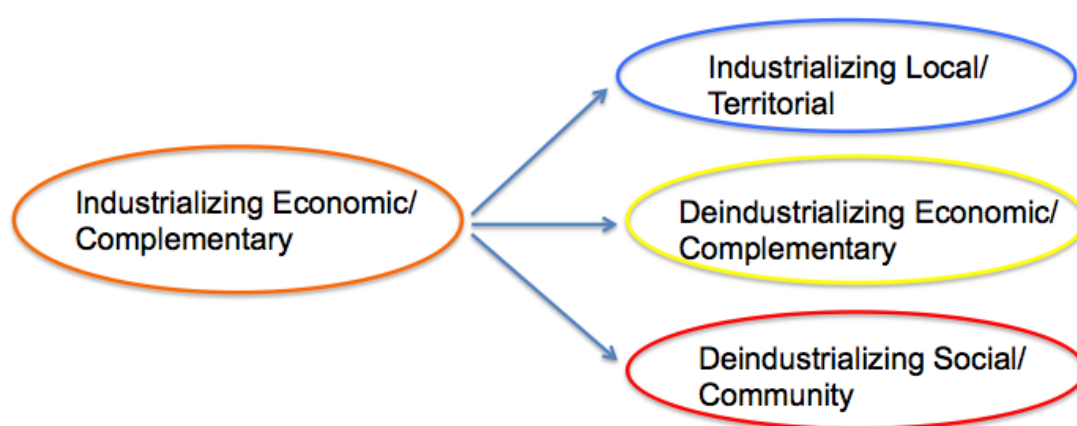


Fig. 5 Tree Diagram of CCs

In contrast with developed countries, developing countries are still on the way to economic development through industrialization, but the process is faster in developing countries at present than in developed countries in the past because the former can imitate and catch up with the latter. As the current standard of living is not high enough, economic development and poverty eradication are the top priority issues. Although developing countries also suffered equally with developed countries from financial crisis and environmental disruption that globalization brought about, they are not so important as economic growth and elimination of poverty.

In developing countries, the problem of aging society has not yet come and local community as family and neighbourhood are still deep-rooted. So economic development and poverty eradication are perceived as urgent problems, and microcredit and CC movements for realizing them have become superior. The present issues of CCs in the developing countries are rather similar to those of CCs of the developed countries in the 1930s when their main purposes are the economic activation to get away from depression and overcome severe unemployment problems after the Great Depression.

In this way, the present developing countries' CCs surrounded by a green circle are located in the first quadrant just below the developed countries' CCs in the 1930s surrounded by an orange circle. These are classified as Industrializing Economic/ Complementary CCs. The present developing countries have not reached the diversification of CCs found in the present developed countries whose socioeconomic environments are different, but in the future they would move toward diversification as economic growth are accomplished and average standard of living improves. Such an evolutionary viewpoint is effective and instructive for the theory and practice of CCs.

In the next section, we take up Banco Palmas in Brazil to examine if it can be regarded as the typical case of Industrializing Economic/Complementary CCs in developing countries in the tree diagram of CCs. This case study will exemplify that the tree diagram of CCs in Fig. 5 is persuasive enough to explain why Banco Palmas is successful from an evolutionary viewpoint and give useful suggestions for CCs in developing and developed countries and solidarity economy in the future.

## 5. BANCO PALMAS COMBINING CC WITH MICROCREDIT BASED ON SOLIDARITY ECONOMY PRINCIPLE

More microcredit schemes rather than CCs have been established in the developing countries that faced with a challenge to tackle poverty and economic development problems since 1980s. Microcredit originated with Muhammad Yunus who founded Bangladeshi Grameen Bank in 1983. It is an attempt to provide mutual aid groups of collectively responsible members with small business funds, for the low-income people's economic independence and improvement of the quality of life.

Banco Palmas, which was established with the leadership of Joan Joaquim Melo Neto for activating local economy in 1998 in the suburb of Fortaleza, is not the same as conventional microcredit scheme because it introduced a local currency as well as microcredit. The uniqueness of Banco Palmas lies in the fact that it issues its own local currency named "Palma" and provide Palma-based microcredit for the purpose of financial support for small businesses and activation of local economy. It is an innovative project to make use of the strengths of both community currency and microcredit by integrating them in the function of Banco Palmas as the local central bank, and to attempt to build solidarity economy in which a bank and a community cooperate to advance together.

As mentioned in the previous section, the environment-independently fitness of CCs cannot be defined. The same applies to the case of Banco Palmas. However, it prospered in a specific socioeconomic environment in Brazil, it cannot be proved that it would necessarily adapt itself well to different environments of other developing countries and developed countries. Keeping it in mind, we will examine what backgrounds and characteristics Banco Palmas had, how local businesses and people have come to accept Banco Palmas, why Banco Palmas and its approach could contribute to the development of local and regional economies by way of its widespread diffusion in Brazil and, finally, whether or not it can be replicated and transplanted in other developing and developed countries. It should be noted that the following descriptions are based on study report (Nishibe, Hashimoto, Kobayashi, Kurita, Miyazaki, Hirota 2012) and a joint workings paper (Kobayashi, Hashimoto, Nishibe 2012) on the field study on Banco Palmas conducted in February 2011 and that they are published in Japanese and unpublished in English.

Banco Palmas is a community bank in Palmeiras district, in the outskirts of Fortaleza, Ceará state of Northeastern Brazil. When resort redevelopment projects along the coast of Fortaleza was officially authorized and promoted in the 1970s, local fishermen and others were driven to the inland. More than 30,000 such people formed Palmeiras district in 1973. In 1981 Palmeiras neighborhood association association of residents (ASMOCONP: Associação de Moradores do Conjunto Palmeiras) (abbreviated hereafter as "the neighborhood association") was established for the purpose of improvement of living conditions in the district that used to be a slum street without basic infrastructure. The neighborhood association won such infrastructure as schools, health and medical cares, traffic, electricity, water and sewage, by the negotiations with the state government, but the cost of living in the district soared. The inhabitants in the district never led comfortable life and local producers could not get loans from commercial banks. In such a severe situation, Banco Palmas was established in January 1998. In 2000, it started to issue its local currency named "Palma" that circulate only in the district in order to create jobs and revitalize regional economy (Fig. 6). The local currency "Palma" can be exchanged for legal tender "Real" at a fixed rate of "1 Palma = 1 Real". Banco Palmas provides microcredit in both Real and Palma for local inhabitants. The local producers and shoppers are permitted to apply for loans to a maximum of 15,000 Reals with the interest rate ranging from 0.5% to 3.5%. The credit for each consumer is also available to a maximum of 600 Reals either by Palmas notes or by PalmaCard, a local credit card only available at the stores in the area (Fig. 7). 240 stores, approximately 90% of all stores in the district, receive Palma, and an average of 5% is discounted if purchases are made in Palma. Banco Palmas provides such loans for house reforms and microinsurance as low-income people cannot usually enjoy. Furthermore, Banco Palmas directly supports such businesses as production and/or sale of cloths (Palma Fashion), detergents (Palma Limpe), and accommodations (Palma Tur), and also carries out vocational training. If young generations receive the training and then get jobs, it could not only create jobs but also contribute to crime prevention, leading to regional development.



Fig. 6 - Five Palmas note



Fig 7 – Palma card (a local credit card)

Notably, Banco Palmas introduced the local currency Palma because it can naturally balance local consumption and production. To realize local production for local consumption, they introduced a new concept ‘prosumer’<sup>3</sup> who is not only a producer but also a consumer, and even a social activist. Banco Palmas also wants to avoid hard competition among local shoppers that would bring all to ruin and destroy local independence of economy. Then Banco Palmas biennially makes a complete map of local production for local consumption by investigating all the shops and their merchandise in the district so that it can select particular producers and give them priority of financial assistance so as not to produce excessive competition, taking into account the restricted volume of aggregate demand in the district. Banco Palmas thus requests selected borrowers to become prosumers.

Palmas Bank has succeeded in entrepreneurial promotion within the area by providing loans at a lower interest rate than a commercial one for low-income residents of the area. More than 1,200 employments as a total is created in Palmeiras district in which 32,000 people of 5,000 households live in as of December 2011 (Currency Solutions for a Wister World, 2010). While the purchase rate of daily necessities within the district was only 20% initially in 1997, it increased up to 95% in 2008 as a result of promoting local production for local consumption by introduction of Palma. We may say that Bank Palmas had succeeded in inducing autonomous development of the

<sup>3</sup> It is the concept that Alvin Toffler proposed in *The Third Wave* (Toffler 1980) to symbolically express that the way in which socioeconomic works will approach to self-help and mutual help in the information age.

local economy in just 10 years. Producer credits amount 4,470 cases for total 3,660,991 Reals, and consumer credits amount 230 cases for total 33,000 Palmas in 2012 (the then total balance of consumer credits is 44,000 Palmas).

Clearly, most of residents in Palmeiras district agree that Banco Palmas has lead to improvement of their standard of living. Because, according to the 2008 survey conducted by University of Ceará State and Ministry of Labour and Employment for 4,000 residents living in the district on Banco Palmas, 98 % of respondents answered 'Banco Palmas contributed to development of Palmeiras district.' Out of them, 25.25% responded 'Their income increased' and 20.2% answered 'They found their jobs' (Silva Jr. 2008). In the interview with us, the founder of Banco Palmas, Melo Neto, said that the role of the community currency in the future should be reviewed because lower income earners decreased and the initial goal that most residents shop inside the district was already fulfilled and that even if the local currency would function more symbolically, local production for local consumption cannot be maintained without it.

## 6. WHAT IS THE LESSON FROM BANCO PALMAS?

What we found out during our stay in Palmeiras district was that not only the bank office, ATM of Brazil Bank, the neighborhood association and public plaza but also workshops for Palma Fashion and Palma Limpe, Palmas Institute, training facilities and shop all lie in the land of Banco Palmas, and that accommodation, music studio and training center are gathered along the main street of the district just in front of Banco Palmas. All of these form local networks for practicing solidarity economy. The neighborhood association ASMOCOMP based on a local community rather than Banco Palmas is located at the core of such network.

Local socioeconomic forum (O Fórum Socioeconômico Local: FECOL) held every Wednesday in Banco Palmas is not only for local meeting but also for public gathering involving young people. Such performance as dancing and singing songs make the younger generation feel much easier to join in the forum. Many members of Palmas Company, the music group organized by the youth in the district Bate, also participate in it. Besides, monthly bazaars are open only for pedestrians in the main street in front of Banco Palmas. The association thus endeavors to induce young people to stay in the community by continuous and comprehensive local activities and ferment their sense of participation.

How on earth was the neighborhood association formed? Many residents from the outset had indispensable needs for the necessities in life such as construction of infrastructure, eradication of poverty, improvement of standard for living, local production for local consumption and prevention of crimes. Local community was spontaneously self-organized by sharing the clear goals as fulfillment of such needs. Then local community set up the neighborhood association for political unity to create collective power and the neighborhood association organized residents and negotiate with the administration to accomplish the shared goals. Banco Palmas was established as a means to solve economic problems that could not be realized by the neighborhood association. Local residents seem to have strong self-esteem and self-awareness to their history in which they by necessity had built and raised Palmeiras district by themselves. Such firm self-consciousness lies at the center of a sense of solidarity in local community. That is straightforwardly expressed in ASMOCOMP' charter stating that 'God created the world but we created Palmeiras district.' Once ASMOCOMP rooted in local community succeeded in creating residents' positive evaluation on local solidarity as the historical primitive memory, the thereafter-continuing activities of ASMOCOMP keep reproducing constant value consciousness as habits of thought or 'inner institutions' of the residents. The reason why local currency 'Palma' smoothly circulated in Palmeiras district is because the local community and the neighborhood association that had complementarily strengthened prior to Banco Palmas give strong support to establishment of Banco Palmas. Since Banco Palmas was based on and sustained by cohesive local community and ASIMOCOMP, it could grow rapidly.



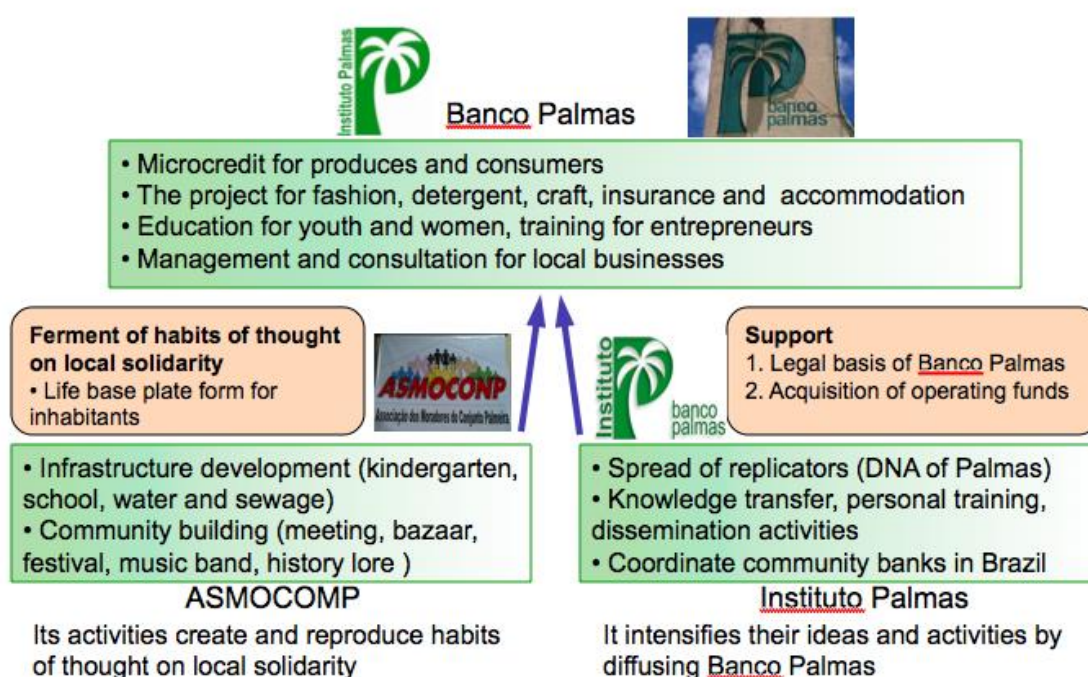


Fig. 8 The relation between Banco Palmas, ASMOCOMP and Palmas Institute

The neighborhood association joined in the creation of Brazilian Network of Solidarity Economy in 2002, and their activities proved to be solidarity economy. When National Secretariat for Solidarity economy (SENAES: Secretaria Nacional de Economia Solidária) was established under the Lula administration in 2003 and the support of the federal government for solidarity economy made clear, Banco Palmas partnered with SENAES and Instituto Palmas was established to function as follows: 1) network domestic community banks (assistance for adopting community banks into other regions), 2) collect information and perform public relations, 3) carry out logistical support (acquire operating funds, establish of the legal basis and etc.). As a result that Instituto Palmas had widely spread the system and experiences of Banco Palmas, more than 30 Banco Palmas type of community banks were founded in Brazil in 2012 and the total number of community banks in Brazil reached 103 (out of them, 37 are located in Ceará) (Instituto Palmas 2012). The similar banks are also present in Venezuela, are planned in Uruguay and Argentina. In this way, Banco Palmas grew based on the neighborhood association rooted in the local community. It also transmitted its experience and know-how to other regions via Instituto Palmas, and supported to build the community banks in other regions (Fig. 8).

Based on the above, let's think about what kind of suggestions Banco Palmas give to solidarity economy and CCs in developing and developed countries. Developed countries have not witnessed so far such a practice as Banco Palmas did to integrate microcredit and CCs. The first question should be why it is so? As we explained above, developed countries are now troubled by the decline of local economies and the collapse of local community including neighborhood and families due to economic globalization and deindustrialization as well as aging society with low birth rates. Accordingly, they have more needs for the CCs for both activating local economy and revitalizing community (or for the latter only), but they have fewer needs for the microcredit schemes designed mainly for poverty eradication and economic independence for the poor although they have been suffering from more serious income and wealth inequality (Piketty 2014). Both developed countries and developing countries have been situated in the same medium-term socioeconomic environments as in "neoliberal cycles", however, they have different dimensions of long-term socioeconomic environments. Such a divergence in developed and developing countries must be the most important factor that eventually leads to the different directions of solidarity economy with CCs and microcredit.

Therefore, it is necessary for developed countries including Japan to reconsider the idea of the solidarity economy, particularly the meaning of freedom, competition and cooperation from the viewpoint of the long-term trends, not middle-term cycles. If solidarity economy is narrowly understood as mere criticism to neoliberal thoughts as libertarianism and policies as deregulation, there would be a danger of falling into a simple rejection of the dichotomy of freedom and competition in the market vs. the bureaucratic planning of the state and discretionary intervention policy of the elite. Rather solidarity economy should be more widely viewed so as to criticize the monetary and financial institutions and insatiable greed for profit of pursuit peculiar to capitalist market economy as well as investors' mentality of individuals or groups as unlimited extension of profit-oriented motives to all socio-economic domains indicated in globalization. Thus solidarity economy need to appreciate such good sides of freedom and competition as to create novelty by innovation in the market at first, and then aim at realizing a better non-capitalist market economy as an alternative to capitalist market economy. If there are a variety of non-capitalist meanings of freedom and competition, we should take account of their positive implications. For example, industrialization based on Taylorism and Fordism made small kinds of mass production dominant. In contrast, a flexible manufacturing system in modern deindustrialization after 1980s could realize various kinds of small quantity production according to different tastes of individuals because more value is attached to diversity of needs and process or product innovation. With respect to dominant information and service industry in developed countries, much more appreciated are the freedom and competition in terms of innovation to create new information on technique, design and functions, new contents as character information, program, movie and music and new services including food, education and medicine, rather than the freedom and competition regarding economy to scale, rationalization, exploitation of price and wage disparity between developed countries and developing countries, and price competition based on cost reduction. The former kinds of freedom and competition produced free /open-source software, Copyleft/ creative commons as criticism to excessive claims of intellectual property rights.

As it can be seen from the above, freedom and competition on innovation in capitalism is not seen as its disadvantage but rather its advantage. Therefore, CCs should neither simply negate freedom and competition in Market, nor affirm reciprocity and redistribution in Community and State. CCs could be appropriately understood as an attempt to remove all the disadvantages of not only competition in Market but also reciprocity in Community and redistribution in State and harmonize the advantages of them. In other words, they seek non-capitalist associational market economy that harmonize business and volunteer on the basis of the "cooperative competition (coopetition)" to combine cooperation and competition (Nishibe 2013, p.14). Capitalist market economy cannot be ethical so long as it is the economic system where money is freely used for means for profit-making or value augmentation of capital in quantity, not as means for exchange of something of different quality. Therefore, if a number of agents (individuals and companies) use money to make ethical investment and reciprocal exchange for production and consumption that do not take into account profit only, they would become a different kind of market economy from a capitalist one.

In the case of Banco Palmas, the key of the successful establishment of local community in Palmeiras district was that residents shared such purposes as infrastructure development, poverty eradication, and local economic growth. Precisely because there had already existed such strong cohesion in the local community, it was possible to guide the success in a short time by forming such a centralized system as "bank" that can monopolistically issue local currencies and carry out loans (credit creation). The similar case of strong cohesion can be found in rapid economic growth in Japan until the mid-1970s after WWII. The clear shared purposes like restoration from defeat and national income doubling helped family, company and neighborhood to sustain their cohesiveness of the communities. In developing countries whose situations are more or less closed to it, it would be relatively easy to form cohesive communities and the scheme of Banco Palmas would be effective.

However, as material desire gets considerably saturated in the post-industrial age of developed countries, people tend to put more value on information and services than physical goods. Because evaluation on information and services, relationship and situation vary from person to person depending on characters and personality, culture and ethics as frame of reference, such a standardized index for richness as GDP per capita no longer hold good. In this case, the setting of the common objective of the local community is not easy. Such an idea as respect of freedom and diversity cannot provide communities with strong cohesion. When common purposes of survival and security arise at the time of economic crisis, natural disaster and war, mutual help and cooperation emerge spon-

taneously, but such communities eventually disappear as everyday life is restored (Solnit, 2010). This is why the CCs in developed countries are strongly expected to function as not only monetary media to stimulate local economies but also linguistic media to form and activate local communities including not only real communities of geography but also virtual communities of interest.

As we have seen before, Joaquim Melo, the founder of Banco Palmas expected that local production for local consumption could not last if they abolished its local currency, Palma. But, as long as there exists such reproducing structure as Banco Palmas and the neighborhood association as to keep maintaining the codes of conduct and value consciousness for local solidarity among residents in Palmeiras district, the disappearance of the local currency would not give much economic impact. However, if the income level of residents becomes much higher and they have come to need the global trade products such as automobiles and computers that are not provided by the local production, diversification of the sense of value and collapse of local community will possibly occur as in the developed countries and local solidarity may fade.

Eventually, developing countries in the future will face the same sort of issues as developed countries do at present. In other words, if developed countries try to imitate the system of Banco Palmas as it is, it won't go well since developed countries must have already lost the key factor for success for the scheme. Accordingly, they must take into account the long-term economic and social trends in which they are situated and carefully conduct original practices corresponding to their own present issues. This enumeration of significant factors is not conclusive; they rather represent economic characteristics. Seyfang (2006) for example identifies the policy context as a crucial environment for the success of Time banks.

## 7. SIGNIFICANCE OF DIVERSITY OF MONETARY INSTITUTIONS FOUND IN CCS

In the developed countries where local communities have collapsed by globalization and deindustrialization, it is not easy to raise such a movement of solidarity economy as in Banco Palmas assuming the preexistence of strong communities. If CCs as social and cultural media can form virtual communities to share the value and norms related to specific themes such as low birthrate and aging, safety and security, natural environment, non-nuclear power and natural energy, and local production for local consumption, the movement for solidarity economy would gain more durability.

As long as communities of interest to share such value and norms are concerned, the main question is how we can mutually connect and coordinate diverse desires and wants for information and services, relationships and environments, not just for material needs for tangible goods, and lead to their coexistence and co-prosperity. The key to solve the question lies in a diversity of socioeconomic institutions, especially monetary and financial ones, because it fundamentally determines the viability of such symbiosis of a variety of interests.

Here, if we define the system where a variety of institutions can coexist as an "institutional ecosystem" (Hashimoto and Nishibe 2017), it is proved that an institutional ecosystem has a self-realization property such that if the factors of equality and diversity are incorporated in a meta-rule to evaluate each institution (game) and determine its frequency, a diversity of institutions (games) are eventually realized, and if the factors of convenience (efficiency) and profit-orientation are adopted in such a meta-rule that is found in globalization, it will result in dominance of a single institution like Market. In other words, as the relative frequency of the people to evaluate the conformity of economy and culture brought about by globalization, e.g., a global single currency or language, as desirable in view of convenience and profit-orientation, the probability of realization of such conformity will increase. Therefore, in order to maintain a diversity of institutions, it is necessary to widely share the value and norm in ethics of ecology to admit that diversity itself is the unique value<sup>4</sup>. How do we incorporate the point in

---

<sup>4</sup> In modern biology, it has become to be widely understood that biological diversity is not only the result of biological evolution over 4 billion years on the Earth but also the necessary condition for future evolution of life because human beings cannot survive undoubtedly if they myopically seek their own purposes and make all other species extinct.

symbiosis and solidarity? This is the most important task of movements and policies based on CCs and solidarity economy.

## BIBLIOGRAPHY

Alcorta, J. A. (2009) *Neoliberal Cycles and Solidarity Economies: A Comparative Study on Argentina and Japan*, Graduate School of modern society and culture, University of Niigata

Bakshi, R. (2005) *Gross National Happiness*, Alternet

Blanc, J. (2011) "Classifying "CCs" : Community, complementary and local currencies types and generations," *International Journal of Community Currency Research*, 15, D4 - 10.

Easterlin, R. (1974) "Does Economic Growth Improve the Human Lot? Some Empirical Evidence" pp.89-125, in David, P. A., Reder, M. W., *Nations and Households in Economic Growth: Essays in honor of Abramovitz*, Academic Press Inc

Frank, A. G. (1967) *Capitalism and Underdevelopment in Latin America: Historical Studies of Chile and Brazil*, Monthly Review Press

Frank, A. G. (1969) *Latin America, Underdevelopment or Revolution: Essays on the Development of Underdevelopment and the Immediate Enemy*, Monthly Review Press

Gesell, S. (1958) *The Natural Economic Order*, Peter Owen Ltd

Haq, M. (1995) *Reflections on Human Development*, Oxford University Press.

Hashimoto, K, Nishibe, M. (2017) 'Theoretical model of institutional ecosystem and its economic implication', *Evolutionary and Institutional Economics Review*, DOI 10.1007/s40844-017-0071-8

Hart. K. (1986) "Heads or Tails? Two sides of the coin", *Man* 21 (4) (Dec. 1986), pp. 637-656

Hayek, F. A. (1976). *Denationalization of Money, The Arguments refined*, The Institute of Economic Affairs.

Instituto Palmas (2102) *Instituto Palmas de Desenvolvimento e Socioeconomia solidária: Relatório Annual 2102*

Izumi, R. (2013) 'Nihon no Chiiki-tsuka seido (Local currency systems in Japan)' in Nishibe (ed.) (2013)

Kimura. K. (2008) 'Chiiki keizai kasseika wo mokuteki toshita chiiki tsuka no genjyo to kadai: Jisaku detabesu no bunseki wo motoni (The present states and problems of the CCs for the purpose of vitalization of local economy: based on the analysis of my own database)' *Sankai ken Ronsyu*, No.20. pp. 107-112

Kinoshita N., Hayashi, Y. (2014) 'Doruka seisaku koku niokeru Chiiki-tsuka UDIS no katsuyo jyokyo (Utilization of Local Currency UDIS in the countries which implement dollarization)' *Shyukan kinyu zaisei jijyo (Weekly monetary and financial affairs)* No. 3067, pp. 34-17, Kinzai

Kusago, Y., Edahiro, J., Hirayama, S., (2011) *GNH: Minna de tsukuru shiawase shakai he (GNH: towards a happy society made by all)*

Kusago, T., Nishibe, M. (2013), 'Community Dock: A New Policy Approach for Altering Institutions', *The Second International Conference on Social and Complementary Currencies in Hague*

Lietaer, B., Dunne J., (2013) *Rethinking money*, Berrett-Koehler publishers

Martignoni, J. (2012) 'A New Approach to a Typology of Complementary Currencies' *International Journal of Community Currency Research*, 16, A1-17

Marx, K. (1970) *A contribution to the critique of political economy*, Progress Publishers

Marx, K. (1976) *Capital: a critique of political economy*, Vol.1, Penguin books

- Marx, K. (1981) *Capital: a critique of political economy*, Vol.3, Penguin books
- Maslow, A.H. (1943) 'A Theory of Human Motivation,' *Psychological Review*, 50, 370-396
- Maslow, A.H. (1954) *Motivation and Personality*, Harper and Brothers
- Nishibe, M. (2006) 'The Theory of Labour Money: Implications of Marx's Critique for the Local Exchange Trading System (LETS)' ch.7 in Uchida. H. (ed.) *Marx for the 21st Century*, pp.89-105, Routledge.
- Nishibe, M. (2011) *Shihonsyugi wa doko he mukaunoka? (Whither Capitalism?)*, NHK publishing.
- Nishibe, M. (2012) "Community Currencies as Integrative Communication Media for Evolutionist Institutional Design," *International Journal of Community Currency Research*, 16 Special Issue (D), 36-48.
- Nishibe, M. (ed.) (2013) *Chiiki-Tsuka (Community Currency)*, Minerva Publishing.
- Nishibe, M. (2014) 'Jyouhou-ka to sabisu-ka no fukugou keikou to siteno datu-kougyou-ka (Deindustrialization as the composite tendency of informatization and servicetization)' *Chishiki kyousou (Co-creation of knowledge)* No.4, G-1-2  
([http://www.jaist.ac.jp/fokcs/papers/4thG-1-2\\_Nishibe\\_Report.pf](http://www.jaist.ac.jp/fokcs/papers/4thG-1-2_Nishibe_Report.pf))
- Nishibe, M. (2015) 'Globalization: Evolution of Capitalist Market Economy through 'Internalization of the Market,' *Evolutionary and Institutional Economics Review*, 12:31-60
- Nishibe, M. (2016) *The Enigma of Money: Gold, Central Banknotes, and Bitcoin*, Springer
- Nishibe, M., Hashimoto, T., Kobayashi, S., Kurita, K., Miyazaki, Y., Hirota, Y. (2012) 'Buraziru Parumasu Ginkou Tyosa Houkokusyo (The Research Report on Banco Palmas, Brazil),' Discussion Paper, Series B, No.104, 1-78, Graduate school of economics, University of Hokkaido (<http://cc.econ.hokudai.ac.jp/system/files/DPB104.pdf>)
- Pikkety, T (2014) *Capital in the Twenty-First Century*, Harvard University Press.
- Polanyi, K. (1944) *The Great Transformation: The Economic and Political Origin of Our Time*, Beacon Press
- Polanyi, K. (1957) 'The Economy as Instituted Process,' Ch.13, in Polanyi, K. Arensberg, M., Pearson, H.W. (eds.) *Trade and Market In the Early Empires: Economies in History and Theory*, The Free Press, pp.243-270
- Primavera, E. (2013) 'Hokan-Tsuka sisutemu, bata kurabu, minsyu syugi: Aruzenchin to Burajiru no kyokun (Complementary currency systems, Barter club and democracy: the lessons of Argentina and Brazil, Ch.16 in Nishibe (ed.) *Chiiki Tsuka (Community Currency)*, Minerva Publishing
- Rowrhorn, R. E., Wells, J. R. (1987) *Deindustrialization Foreign Trade*, Cambridge University Press
- Sano, M. (2012, 2013) 99% no tameno keizaigaku: 1. Kyouyou-hen, 2. Riron-hen (The Economics for 99%: 1. General knowledge, 2. Theory), Shin-hyoron publishing
- Sen, A. (1992) *Inequality Reexamined*, Clarendon Press.
- Sen, A. (1999) *Development as Freedom*, Oxford University Press.
- Silva Jr., Jeová Torres (2008) *Avaliacao de impactos e de imagem: Banco Palmas 10 anos*, Arte Virtual
- Solnit, R. (2010) *A Paradise Built in Hell*, Penguin Books.
- Stiglitz, J. E., Sen, A., Fitoussi, J. (2010) *Mismeasuring Our Lives: Why GDP Doesn't Add Up*, The New Press
- Toffler, A. (1980) *The Third Wave*, Bantam
- Tokutome, Y. (2011) *Shiiki-Tsuka Zen Risuto (The Complete list of CCS in Japan)* <http://cc-pr.net/list/>

*The United Nations Development Programme (1990) Human Development Report: Concept and Measurement of Human Development, Oxford University Press.*

*Ura, K., Alkire, S., Zangmo, T., Wangdi, K. (2012) An Extensive Analysis of GNH, Centre for Bhutan Studies*