



**Sustainable shared growth** is a research and advocacy of the Sekiguchi Global Research Association / Atsumi International Foundation that is shared with the Association for Good Government. It refers to the three economic goals of efficiency, equity, and environmental friendliness.

“COMMUNITY CURRENCY IN A DISASTER:  
3.11 TWICE REMEMBERED” by  
Max Maquito<sup>1</sup> and Joffre Balce<sup>2</sup>

APRIL 21, 2020

**Summary.** The Policy Brief’s aim is to glean lessons from the March 2011 tsunami disaster that struck Japan that are relevant to the current pandemic. Buttressing the extensive hard infrastructure was the soft infrastructure embodied in the social capital of Japanese communities which contributed to the simultaneous diminished vulnerability and improved resiliency of these communities. This brief further focuses on community currencies as a policy instrument whose functions are to enhance social capital and hasten the movement of money, thereby contributing to reducing vulnerability and enhancing resiliency of communities.

**Lightning Strikes Twice on the Same Day.** 3.11 is a day to be twice remembered: first as the *san ten ichi ichi* which in Japanese refers to the day the nation was dealt the triple blow of an M9.1 earthquake that triggered a record tsunami and a nuclear disaster in 2011: the second, nine years to the date, is when the WHO declared COVID-19 a pandemic.

<sup>1</sup> PhD in Economics; Chief Representative, Sekiguchi Global Research Association Philippines; Asst. Prof. College of Public Affairs and Development, University of the Philippines Los Baños; sgraph@gmail.com

<sup>2</sup> Secretary, Association for Good Government, New South Wales, Australia; joffre.balce@gmail.com

This Policy Brief extracts general lessons from 2011 relevant for discussions in the 2020 pandemic and in preparation for any similar for future challenges.

**Nature of Disaster.** While an earthquake and a viral outbreak are essentially two different disasters, both offer common and general characteristics. First and foremost is their common origin in nature; tectonic plate movements and evolving virus strains precede humanity’s existence. Second is their scale of devastation that etches a mark not only in the periods they occurred but also across mankind’s history. They can inflict enormous damage on a nation but can be counteracted in two ways.

**Hard Infrastructure.** Japan’s extensive network of wave breakers, seawalls, flood gates, coastal forests, by global standards, were a formidable defence against tsunamis in the Eastern seaboard. Systematic studies confirm that these structures were significantly able to dissipate the onslaught. A study (Suppasri et al. 2013), for example, estimated that the wave breakers reduced tsunami height by over 75% (from 10.8 to 2.6 m) which, under worst expected scenarios, would have been adequate to mitigate serious damage. However, the epic onslaught in the Tohoku region was greater than it could bear. Because the tsunami surpassed the worst scenarios anticipated, the casualties tragically resulted in the loss of around 20,000 lives dead and 2,500 missing..

Similarly in the 3.11 pandemic, with the world now as the arena, the hard infrastructure, epidemic-response capabilities, were put to a similar stress test. The wave of COVID-19 infections overwhelmed our supply of testing

kits, personal protective equipment and other facilities.

Japan promptly embarked on a REbuild, REbuild, and REbuild program of her infrastructure to even higher standards after the tsunami disaster of 2011. The objective here was primarily to reduce her vulnerability to future tsunamis. At the same time, however, the reconstruction program is a hallmark of Japan's resiliency, not only because it was aimed at rebuilding damaged hard infrastructure, but also because it improved the resiliency of an economy marred by tragic losses. Job creation and pump priming can repeat the US Keynesian countermeasures against the Great Depression of the 1930s, when Pres. Franklin Delano Roosevelt signed the New Deal that triggered a construction boom.

Such boldness is once more required as a Great Depression threatens the global economy (BBC 2020) in a pincer attack. From one side is a financial meltdown that happens every decade or two; the other, a biological maelstrom that occurs once a century -- both occurring simultaneously and each magnifying the damage wrought by the other. Early this year, even before COVID-19 grabbed the world's attention, the IMF Chief sounded the alarm of another Great Depression coming as a backlash to widening inequality within countries and growing financial instability (Inman 2020).

**Soft Infrastructure.** Essential to the recovery and resiliency after the 3.11 tsunami was restoring and enhancing soft infrastructure -- namely, the social capital of communities. One study which covered all the municipalities of the Tohoku region of Japan, revealed a correlation of higher casualties not only with greater tsunami heights but also lower social capital and weaker ties with the long-ruling political parties (Aldrich and Sawada 2015). The study referred to social capital, on the one hand, as ties within the community that enable resilience to a natural disaster and imbues its members with a *esprit de corps*, thus fostering more open collaboration and personal investment in the future of the community. Ties to the ruling political party, on the other hand, apparently

contributed to reducing the vulnerability of communities to the disaster for it brought more funding for hard infrastructure and tsunami countermeasures.

Thus, while there are varieties of enhancing social capital, this Policy Brief focuses on the role of Community Currencies..

**Role of Community Currency (CC).** A CC is a form of money that could be used as a medium of exchange, a unit of account, or a store of value within a certain community, usually well defined by geographical parameters. The design of a CC is not to subvert but to complement the existing fiat currency. Historically, CC has served a policy tool that helps revive local communities by promoting local economic growth and forging community social capital.<sup>3</sup> Based on our interview with a Japanese CC expert, CCs at its peak in Japan numbered around 1,000. However, ironically, as the economy grew, interest in CCs began to wane and, with it, the falling enthusiasm for community development and the ageing Japanese society. Nevertheless, the spate of recent disasters appeared to have renewed interest in CCs. One shining example of a CC which emerged from the 3.11 tsunami disaster is the Doumo CC. At least five communities in the disaster-struck northeastern region of Japan have adopted CCs as part of the experiment, *Fukkou Ouen Chiiki Tsuka* (CC for supporting disaster recovery). Doumo was piloted in Kamaishi from September 2013 to January 2014. This experiment was prompted by the implementation of CCs in normal (non-disaster) communities such as Bunji<sup>4</sup> in Kokubunji City, Metropolitan Tokyo, since September 2012 (Nakazato and Lim 2017).

**The Scheme of the Doumo CC.** Below is a flowchart of the Doumo CC,

<sup>3</sup> See, for example, (Nishibe 2000)

<sup>4</sup> The lead author of this Policy Brief was able to visit and interview members of this CC in the summer of 2019. Bunji's Home Page: <http://bunji.me/index.html>



Source: Heita Doumo Club  
<http://www.konnodenki.com/heitadomo/shikumi.php?id=18010002> (accessed April 17, 2020)

The critical steps in the Doumo CC process are as follows (as explained by the source above)

1. Donations from all over the country for the disaster-stricken community are collected by a civil society organization, in Doumo’s case, the Sawayaka Welfare Foundation
2. The donations are forwarded to the Administrative Office of the CC, which then prints out the CC in 500 Doumo bills at parity (one Doumo is equal to one Japanese Yen). The donor’s name is indicated in each bill (see Doumo bill below)
3. Members of the Doumo CC club are given four bills per month, on the condition that they have no Doumo CC in their possession. This continues until the donation has been exhausted.
4. Member A is helped by Member B in some voluntary way (e.g., Member A, who lives alone, cannot cook a meal, while Member B has more than enough cooked food, part of which she gladly gives to Member A)
5. Member A repays the kindness by giving Member B Doumo (at most two bills per transaction). The exchanged CC bill records this transaction (see Doumo bill below).
6. Both members can transact with other members, like Member C. The point here is that the CC is circulated among the members who are all connected by acts of kindness.

7. Members could use the CC to purchase goods and services from affiliated stores, after each bill has at least two recorded transactions (see Doumo bill below)
8. The affiliated stores could return the received CCs to the Administrative Office, with each bill signed by the affiliated store
9. The Administrative Office converts the CCs to their Japanese yen equivalent at the parity exchange rate.

The figure below shows the front and back sides of the Doumo 500 bill, with two transactions recorded, one on June 2nd, and another on June 6th. The names of the two transacting parties are also recorded for each transaction, contributing to transparency.



♥ Content of Supports ♥

Date	Requester	Provider	Content
6 / 2	平田太郎	復興花子	Replacing lightbulbs in toilet
6 / 6	復興花子	釜石一郎	Sharing seaweed boiled & seasoned
/			

Name of Affiliated Shop Receiving this Coupon: \_\_\_\_\_ Date: \_\_\_\_\_

Expiration Date: 2015/06/01 まで

Source: (Nakazato and Lim 2017), p.83

The main lessons learned from the Doumo CC experimentation are as follows:

1. The use of the CC encouraged support relationships, realizing the CC’s “potential for creating and/or reviving personal networks in local communities as well as for promoting the exchange of mutual support among local residents” (Nakazato and Lim 2017), p. 89. Whereas more efforts were needed to encourage members to expand their transactional relationships beyond what is accustomed, the CC experiment indicated

that this was possible as members showed willingness to continue with using the CC even when the donations have been exhausted.

2. The use of the CC enhanced the perceptions of members regarding the resiliency or ability for their community to recover. What helped was a careful process of selection, wherein members having a higher levels of community resiliency perception (optimists) would form the core of the community, and a process of influence, wherein the optimists would elevate the level perception of members who are less optimistic (Lim and Nakazato 2018).

#### **Feasibility of CCs in Developing Countries.**

This begs the question whether CC's are feasible in a developing country. In principle, we have deemed a CC as a mechanism for achieving sustainable shared growth desirable for a developing country like the Philippines.<sup>5</sup> In addition to previously identified benefits of equity and efficiency, we add one more per each economic goal. In terms of equity, enhancing social capital fosters fairness -- economic activities not previously quantified, such as voluntary acts, get compensated, as they rightfully should be for sustainability. In terms of efficiency, the introduction of CC in a post-disaster situation expedites payments and avoids critical delays in disbursing fiat money from aid and other sources to establishments and some crucial services suffering from the quarantine. .

Since our initial explorations in 2018, we have yet to discover an operational CC in the Philippines. However, offering hope in another developing country is the Sarafu Credit CC of Kenya<sup>6</sup> whose mere existence implies that it is possible for CCs in the Philippines. Nevertheless, high transaction costs incurred in implementing and maintaining CCs could be a

major discouragement (Perez, Maquito, and Bello January 9 -13, 2020).

A possible design for a CC to skirt around the transactional cost of the Philippines is to apply current technologies of SMS-based money like G-Cash and SMARTMoney of the two major telecommunication players. Their economies of scale enables them to whittle transactions cost while getting their fair share in operations. In coordination with their corporate foundations and correspondent banks, they can provide old but usable mobile phones donated by their subscribers as electronic wallets for disbursements by DSWD programs of the 4Ps and Land Bank and Development Bank of the Philippines credit programs. Rural based financial institutions like rural banks, credit co-ops and microfinance institutions can get accredited as depositories and encashers of the "e-CCs" if they meet strict regulatory standards of performance, report submissions and audits. Thus, soft infrastructure and hard infrastructure nurture each other in a virtuous cycle and even open web-based jobs if the ICT is adequate.<sup>7</sup>

Based on conversations in sustainable shared growth seminars and with CC experts in Japan, two principles could be further deduced to explain how Japan is a veritable CC superpower.

One is its deep sense of linking voluntarism with community service. Repaying volunteers presented a problem that was actually a trigger in the development of CC in Japan. The problem was that the Japanese generally do not engage in volunteer acts of kindness for personal gain, whether the reward be monetary, fame, or in other forms. However, Japanese volunteers were convinced of using CC when they saw that it contributed to a social good: the community's development. Getting paid was a bonus.

Another is the strong group identity which creates *esprit de corps*. Stories after the 3.11 tsunami abound of how disaster-stricken communities began rebuilding even before the

<sup>5</sup> See [Sustainable Shared Growth Seminar #26 Report](#). This report also contains a brief survey of CC-related literature

<sup>6</sup> See [Sustainable Shared Growth Seminar #25 Report](#)

<sup>7</sup> It should be noted that the above-mentioned Kenyan Sarafu Credit CC has already gone digital.

dust settled, affirming the spirit that sustained Japan's blistering pace of reconstruction after the second world war and the strong sense of pride over one's community or nation.

Could these features be found in the social capital of Philippine communities? One of the biggest drawbacks of our communities is a low effective level of social capital, caused by its inequitable distribution in favor of the more affluent and educated within growth centers (Godquin and Quisumbing 2006), (Abad 2008).

**Policy Recommendations.** In both 3.11 disasters, the ability to react quickly, once a warning has been sounded, has turned out to be critical in mitigating the damage. One crucial factor that speeds up response is shared community experience or historical memory of previous disasters. In the case of the 3.11 tsunami, this was perpetrated through traditions as the protocol of prompt self-evacuation, tsunami memorial markers, and tsunami festivals (Suppasri et al. 2013). The communities in northeastern Japan are no stranger to tsunamis, with a history as far back as 1896 and 1933. Similarly, countries, where painful memories of epidemics were fresh, were among those most alert and prepared.

Communities can design ways to etch shared memories of the 3.11 pandemic into tradition, among them surely will be solemn moments of silence (as is done in Japan) or even temporary voluntary quarantine done on every 11th of March. For this reason, we recommend policies for the post-COVID era learned from the 3.11 tsunami, lest these be forgotten..

❖ Disaster-Aware Reactivation of the Hard Infrastructure program

This can immediately commence, since hard infrastructure in the case of a pandemic serves both to reduce vulnerability for another pandemic and to enhance resiliency during the ongoing contagion (biological and financial). Pandemic realities, (e.g., strengthening the construction chain with front liner prerogatives, and realigning budgetary items) should manage expectations of realistic results..

❖ Enhancing Social Capital of Communities

Camaraderie abounds among Filipino *barkada* systems, but there is a gap in bridging capital among different socio-economic classes and backgrounds that form dense relationships (Abad 2006). There are enough recent examples in the Philippines of LGU leadership that have overcome said weak ties and strengthened the community (Ranada 2014).

❖ Promoting the Use of CCs

Given their potential benefits in both good and bad times, CCs deserve policy support and attention. This means research, information sharing and communicating the CC idea. While there are none on record in the country, a policy toleration, openness and encouragement of pilot studies and even thought experiments should be adopted to find an appropriate model.

❖ Interfacing soft and hard infrastructure.

Finally, where traditional politics fails, the application of technology may succeed in interfacing the social capital generated by prospective CCs with ICT, as described earlier. Current government programs can tether the CCs for implementing programs on LGU levels while strengthening financial capabilities of community financial institutions..

#### Examining the Fundamentals of an Earlier Model: Wörgl 1932.<sup>8</sup>

Knowing that the Japanese CC initiatives were inspired by the cult following of the novel and movie *Momo*, it would be interesting to reflect on the inspiration from which its author (Michael Ende) got the idea of the value of time as the currency one is born with. It came from a City's experiment in 1932, Wörgl, an Austrian City whose population at the time was 5,000, had 500 unemployed and 200 families living in poverty. Down to its last Austrian schillings (A£40,000) and mounting back taxes uncollectible from a moribund economy, Mayor Michael Unterguggenberger and his council embarked on a bold experiment.

<sup>8</sup> There are various models of CC since there are many forms of communities. This box discusses another one.

Drawing from Silvio Gessel's ideas of Free Money (*Freigeld*), a self-educated economist like his predecessor, Henry George (Onken, 2000), the Mayor convinced the Council to deposit the treasury's last monies and issue a CC called the Wörgl Scrip (WS) -- whose value was tethered to the A£40,000 and its continued use required a monthly duty stamped on the scrip. At first, it was used to pay civil servant salaries and welfare but as trust in the WS grew and the treasury, as promised, accepted taxes paid in WS, the Wörgl local government was able to repair infrastructure and build new ones, including a ski ramp that attracted tourists when winter arrived.

### The Wörgl Scrip



Despite the successful idea catching wildfire among local governments, the Austrian Central Bank dragged the Mayor to court which decided to outlaw the WS and similar experiments, in defense of the monopoly of currency creation by national government and paranoia over the ideological similarity to the ascending Nationalist Socialism in neighbouring Germany. (Lietaer, 2010).

Nevertheless, Wörgl 1932 remains a proof of concept to this very day when visiting tourists see plaques that read: "This was built by Free Money." as a reminder of the miracle of Wörgl. Essentially, the economic success of the WS as a CC are also visible in the Duomo CC experience as they were implicit in Book Five on Money of *The Science of Political Economy*:

#### On the demand side:

(a) its use as a legal tender: the citizens of

Wörgl accepted the scrip as medium of exchange in payment of goods and services as well as wages and tax payments..

(b) public trust: Mayor Unteruggenberge obtained the official approval of the town council to issue scrip based on the escrow account of the treasury and was true to his word of the City accepting it for payment of taxes and fees. Unfortunately, it did not have the national government's support.

(c) the urgency to spend it and not hoard it: Scrip bearers could not afford to keep the currency idle and lose its value over time. They needed to spend it, and pay taxes or incur a form of excise tax the longer one holds it and

(d) the opportunity loss of hoarding it as wealth and as a speculative asset: WS was invulnerable to speculative attack. Keeping it idle meant losing its value but using it immediately yielded an economic benefit—economic transaction.

#### On the supply side:

(a) an efficient tether of value: Backing up the Wörgl scrip was an escrow account of A£40,000. It was not simply issued by the local government's word to honour it;

(b) money as a claim on an obligation: government won the public trust when paying taxes with WS delivered infrastructure and public services to an extent that exceeded the promise to the council and citizenry and obliged the citizens to pay taxes promptly;

(c) economic participation: people who spent WS perked up aggregate demand, businesses paid with WS employed labour and spurred aggregate supply and taxpayers saw quick returns to the community;

(d) a virtuous cycle of fiscal and community activity: WS made it easy for people to pay back taxes by providing the convenient means to pay them and the economic activity to generate value for both the taxpayer and the government.



POWERED BY THE  
ATSUMI INTERNATIONAL FOUNDATION  
SEKIGUCHI GLOBAL RESEARCH ASSOCIATION  
[www.aisf.or.jp/sgra](http://www.aisf.or.jp/sgra)

公益財団法人  
暹羅國際交流財団

## ACKNOWLEDGMENTS

We thank Chief Librarian Mary Ruth Rasco of the College of Public Affairs and Development at the University of the Philippines Los Baños for her kind assistance in accessing references not readily available from the internet. In addition to the support for these policy brief series, we would like to thank Managing Directress Junko Imanishi of Atsumi International Foundation also for making possible the lead author's interview of CC experts in Tokyo during the summer of 2019.

## REFERENCES

- Abad, Ricardo G. 2006. *Aspects of Social Capital in the Philippines: Findings from a National Survey*.  
———. 2008. "Social Capital in the Philippines: Results from a National Survey." *Philippine Sociological Review*.  
<https://doi.org/10.3860/psr.v53i0.135>.
- Aldrich, Daniel P., and Yasuyuki Sawada. 2015. "The Physical and Social Determinants of Mortality in the 3.11 Tsunami." *Social Science & Medicine* 124 (January): 66–75.
- BBC. 2020. "Coronavirus: Worst Economic Crisis since 1930s Depression, IMF Says." BBC News. April 9, 2020.  
<https://www.bbc.com/news/business-52236936>.
- George, Henry. *The Science of Political Economy: Book Five*. Robert Schalkenbach Foundation, New York, 2004.
- Godquin, Marie, and Agnes R. Quisumbing. 2006. "Groups, Networks, and Social Capital in the Philippine Communities." CAPRI. CAPRI Working Paper. International Food Policy Research Institute.  
<http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/33526/filename/33527.pdf>.
- Inman, Phillip. 2020. "IMF Boss Says Global Economy Risks Return of Great Depression." The Guardian. January 17, 2020.  
<https://www.theguardian.com/business/2020/jan/17/head-of-imf-says-global-economy-risks-return-of-great-depression>.
- Lim, Seunghoo, and Hiromi Nakazato. 2018. "Co-Evolving Supportive Networks and Perceived Community Resilience across Disaster-damaged Areas after the Great East Japan Earthquake: Selection, Influence, or Both?" *Journal of Contingencies and Crisis Management*, 1–14
- Lietaer, Bernard. "The Worgl Experiment. Austria: 1932-33." posted in 27 March 2010 in *Currency Solutions for a Wiser World*. <http://www.lietaer.com/2010/03/the-worgl-experiment/>
- Michael Ende (Momo) über Silvio Gesell und alternative Geldsysteme.*  
<https://www.youtube.com/watch?v=6E8he7kLkRM>
- Nakazato, Hiromi, and Seunghoo Lim. 2017. "Community Rebuilding Processes in a Disaster-Damaged Area through Community Currency The Pilot Project of Domo in Kamaishi, Japan." *Disaster Prevention and Management* 26 (1): 79–93.
- Nishibe, Makoto. 2000. "The significance of community currencies as integrative communication media." *Asteion* 53 (May): 127–62
- Onken, W. (2000). The Political Economy of Silvio Gesell: A Century of Activism. *The American Journal of Economics and Sociology*, 59(4), 609-622. Retrieved April 20, 2020, from [www.jstor.org/stable/3487828](http://www.jstor.org/stable/3487828)
- Perez, John Erinorio M., Ferdinand C. Maquito, and Rolando T. Bello. January 9 -13, 2020. "Analysis of Community Currencies as Payment Mechanism for Sustainable Shared Growth." presented at the Fifth Asia Future Conference, UPLB, Philippines.
- Ranada, Pia. 2014. "The Calamity of Mistrust." Rappler. February 1, 2014.  
<https://www.rappler.com/move-ph/ispeak/49183-calamity-mistrust-social-capital>.
- Suppasri, Anawat, Nobuo Shuto, Fumihiko Imamura, Shunichi Koshimura, Erick Mas, and Ahmet Cevdet Yalciner. 2013. "Lessons Learned from the 2011 Great East Japan Tsunami: Performance of Tsunami Countermeasures, Coastal Buildings, and Tsunami Evacuation in Japan." *Pure and Applied Geophysics*.  
<https://doi.org/10.1007/s00024-012-0511-7>.