



**ADB Working Paper Series**

**EXPLORING COMMUNITY-BASED  
FINANCING SCHEMES TO FINANCE  
SOCIAL PROTECTION**

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**Abstract**

Social protection, especially health care systems for the poor, is essential to reduce inequality. Health-related shocks, such as death or severe sickness, can affect households' budgets significantly and create serious household trauma, leading to higher possibilities of them falling into poverty traps. The main challenge of social protection is improving coverage to provide services to people in rural and resource-poor environments. Microfinance health-related services, such as community-based health insurance, are expected to fill the gap. However, this concept also faces many challenges, including sustainability, governance, a lack of data, and a lack of capable human resources to manage it. On the other hand, the fast development of financial technology has raised the development of the crowdfunding platform for medical services. However, this concept only finances the medical expenses of people with a serious disease whom insurance or research for new medicine or treatment do not cover. This paper explores new and innovative ways of financing social protection, especially to improve access to health care services for poor and marginalized communities. Taking advantage of the development of financial technology and looking at how we can address the failures of community-based forms of health insurance, this paper will connect the sustainable financing concept, such as hometown investment trusts (HTITs) and crowdfunding, with community-based forms of health insurance. This paper proposes two models: (1) the two-step HTIT health insurance model; and (2) the integrated HTIT health insurance model.

**Keywords:** community-based health insurance, crowdfunding, hometown investment trust fund, health care system

**JEL Classification:** O31

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## 1. INTRODUCTION

Data from the United Nations Department of Economic and Social Affairs (UN DESA) show that the share of the population living on less than \$1.90 and \$3.20 per day in Asia and the Pacific declined from 2000–2004 to 2010–2013; however, a close look shows unequal achievements among regions. The decline in the population living on less than \$1.90 and \$3.20 per day has been driven mostly by declines in East Asia. However, we can see that, in South and West Asia, more than 25% still live on less than \$3.20 and that about 10% still live on less than \$1.90 per day.

Public spending on education, health care, and social protection is important to accelerate poverty reduction (Wilhelm and Fiestas 2005). Studies conducted by the Organisation for Economic Co-operation and Development (OECD) (Alper and Demiral 2016) have shown that public health and education expenditure contributed more to GDP growth than private expenditure. In developing countries, an increase of 1% in public health investments reduces child mortality rates by approximately 0.86% and \$1 invested in schooling, particularly for girls, generates earnings and health benefits (benefit–cost ratio) of \$10 in low-income countries and \$4 in lower-middle-income countries (Haile and Niño-Zarazúa 2017).

Projections indicate that continuous increases in spending on education, health, and social protection will lift more people out of poverty. UNESCAP estimated that more spending on education alone can enable 19 million people in 2020, 24 million in 2025, and 26 million in 2030 to escape from poverty. Increased spending not just on education but also on health and social protection will rescue 49 million in 2020, 63 million in 2025, and 52 million in 2030 from poverty in the Asia and Pacific region. Data from UN DESA show that countries that spend less than a quarter of the global average of 20.1% of their GDP also have the highest levels of moderate poverty. Therefore, spending levels matter.

The literature has recognized well the role of social protection, including access to finance and public goods, in satisfying basic needs for human and social development. Access to financial services will enable them to have a better economic advantage, and access to safe water, basic health services, and primary education can contribute to improving productivity. However, access to these services remains quite limited in a number of developing countries. In response, a number of alternatives, chief among them microfinancing, provide vulnerable groups with access to social protection by enabling them to have access to financial products and build assets, with the goal of preventing people from sliding into poverty traps (Arun and Murinde 2010).

One major element of social protection is access to health care services. A lack of social protection in terms of health care can widen the inequality that already exists. While both negative and positive shocks can affect household budgets significantly, health-related shocks, such as death or severe sickness, can create serious household trauma, generating higher possibilities of these households falling into poverty traps. While the World Health Organization (WHO) has appealed to countries to improve the capacities of their health systems to address the needs of the population, this is easier said than done. The main challenge that countries face is improving the coverage to provide services to people in rural and resource-poor environments. According to O'Donnell (2007), geographic accessibility and affordability are two of the four dimensions that people consider regarding access to health care services. Therefore, there is complementarity between the services of microfinance offers regarding health-related services (Leatherman and Dunfordb 2010). On the other hand, the utilization of microfinance services to finance health care can also benefit microfinance institutions,

as having healthier clients can ensure the long-term viability of these institutions. Most importantly, aligning health programs with microfinancing can address the biggest question of how we can finance social security for the poor (Saha 2014).

Given the speed at which technologies develop, many new companies offering financial services have been gaining traction (Frost et al. 2019). This can have a positive impact, especially for members of marginalized communities who lack financial access and public services, such as the utilization of crowdfunding platforms to finance medical services. Among the existing cases, however, crowdfunding has only financed the medical expense of people with a serious disease whom insurance or research for new medicine or treatment do not cover (Snyder 2016). There is therefore potential to use this crowdfunding mechanism to improve the social protection coverage for poor and marginalized communities.

This paper will explore new and innovative ways of financing social protection, especially to improve access to health care services for poor and marginalized communities, by considering how we can address the failures of community-based forms of health insurance, such as micro-insurance and cooperative insurance, which are arguably the most accessible and useful forms of health insurance for low-income, high-risk individuals, by marrying them with concepts of sustainable financing, such as hometown investment trusts (HTITs) and crowdfunding.

We draw from various case studies in Asia and the Pacific. The paper will proceed as follows. Section 2 will build on the Asian Development Bank's definition of social protection and assess the financing needs for social protection in the region. This section will also examine the coverage in terms of breadth and depth in Asia and the Pacific. Section 3 will then explore community-based health insurance schemes, such as community-based health insurance (CBHI), cooperative insurance, and takaful. We will look at these examples and assess the problem of these schemes' lack of sustainability, though they are arguably the most applicable to low-income, high-risk individuals, leaving many would-be clients uncovered and at the risk of sliding into poverty traps. Next, we will investigate modes of sustainable financing, such as HTITs and crowdfunding, and consider various case studies to assess the successes and challenges of implementing such financing schemes. Section 4 will explore two models of alternative financing based on the HTIT model to finance health care and small-medium enterprises. Finally, section 5 will provide some conclusions and policy recommendations.

## **2. FINANCING NEEDS FOR SOCIAL PROTECTION**

The Asian Development Bank (ADB) defined social protection as the set of policies and programs aiming to reduce poverty and vulnerability by promoting efficient labor markets, diminishing people's exposure to risks, and enhancing their capacity to protect themselves against hazards and interruption/loss of income. ADB originally mentioned social protection as consisting of five major elements: (i) labor markets, (ii) social insurance, (iii) social assistance, (iv) micro and area-based schemes to protect communities, and (v) child protection. In its recent publications, however, it defined social protection programs in three categories: social insurance, social assistance, and labor market programs:

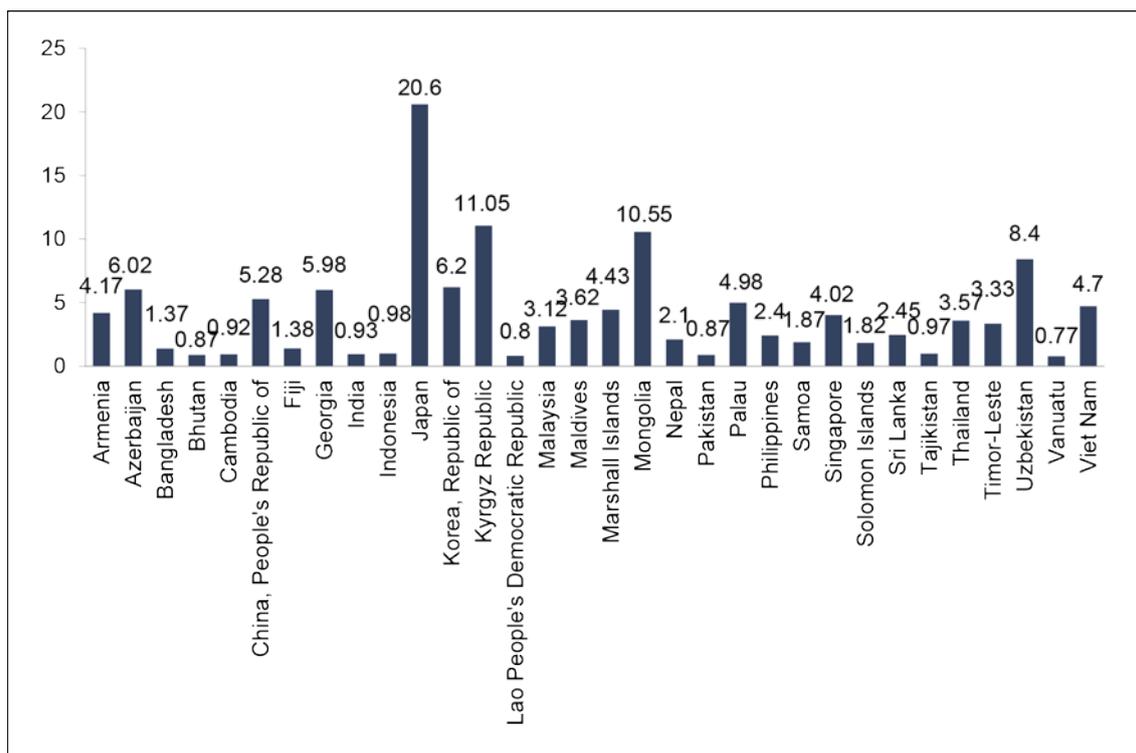
- a) Social insurance uses contributory schemes to help people respond to common risks such as illness, old age, and unemployment. Its major subprograms are health insurance and pensions. It includes passive labor market programs, such as unemployment insurance and severance payments.

- b) Social assistance provides unrequited transfers to groups, such as the poor, that either do not qualify for insurance or receive inadequate benefits. The major subprograms of social assistance are cash or in-kind transfers, child welfare, assistance for older people, health assistance, and disability benefits.
- c) Labor market programs actively help people to secure employment. Major subprograms include labor market programs such as skills development and training programs and special work programs such as cash- or food-for-work programs.

Most countries in the Asia and Pacific region spend, on average, less than one-third of the global average of 11.2% of GDP on social protection. Underinvestment in social protection implies that 60% of the people in the Asia and Pacific region are unprotected against risks such as sickness, disability, and unemployment or during pregnancy or old age.

Figure 1 shows the average spending on social protection as a proportion of GDP from 2008 to 2013 in selected countries in Asia and the Pacific. We can see that Japan has the highest spending as a proportion of its GDP, spending about 20.6% of its GDP on social protection. This is followed by some Central and other East Asian countries, such as the Kyrgyz Republic (11.05%), Mongolia (10.55%), Uzbekistan (8.4%), and the Republic of Korea (6.2%). In Southeast Asia, the numbers are lower, with Singapore at 4.02%, Malaysia at 3.12%, and the Philippines at 2.4%. We can gain a better understanding of the reach of social protection spending by looking at ADB’s Social Protection Indicator (SPI).

**Figure 1: Average Spending on Social Protection as a Percentage of GDP from 2008 to 2013**

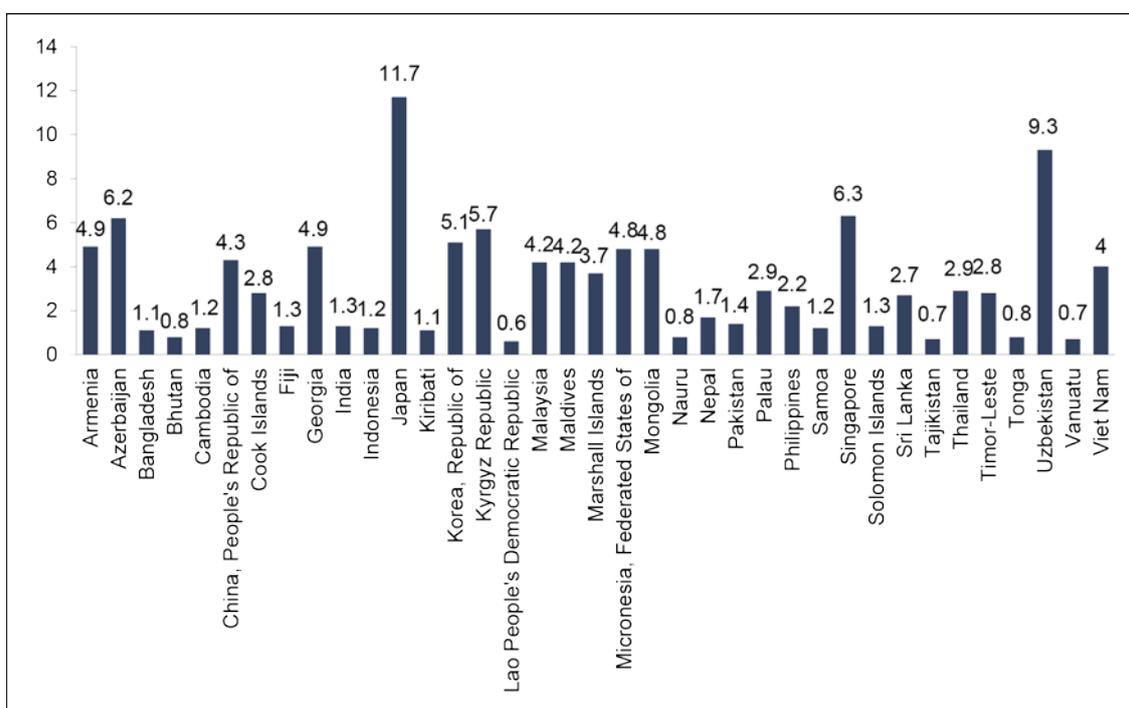


Source: ADB (2016).

ADB’s SPI is an indicator for assessing social protection’s effectiveness within and across countries. ADB calculates it first by dividing the total expenditures on social protection by the total potential beneficiaries of social protection. It then compares this ratio with the gross domestic product (GDP) per capita. Thus, if the increase in social protection expenditures on potential beneficiaries does not match the increase in GDP per capita, the SPI will fall. As the SPI rises or falls compared with a country’s level of GDP per capita, ADB presents a country’s SPI as being equivalent to a percentage of the GDP per capita.

Therefore, we can see in Figure 2 below that higher-income countries in Asia and the Pacific tend to have higher SPIs. Japan’s SPI is 11.7%, which is the highest in the region; Singapore’s is 6.3; and the Republic of Korea’s is 5.1. However, we can see high SPIs for Central Asian countries, such as Uzbekistan at 9.3, Azerbaijan at 6.2, and the Kyrgyz Republic at 5.7. The data from ADB also show that, in many countries, social insurance tends to have the largest SPI, followed by social assistance and labor market programs.

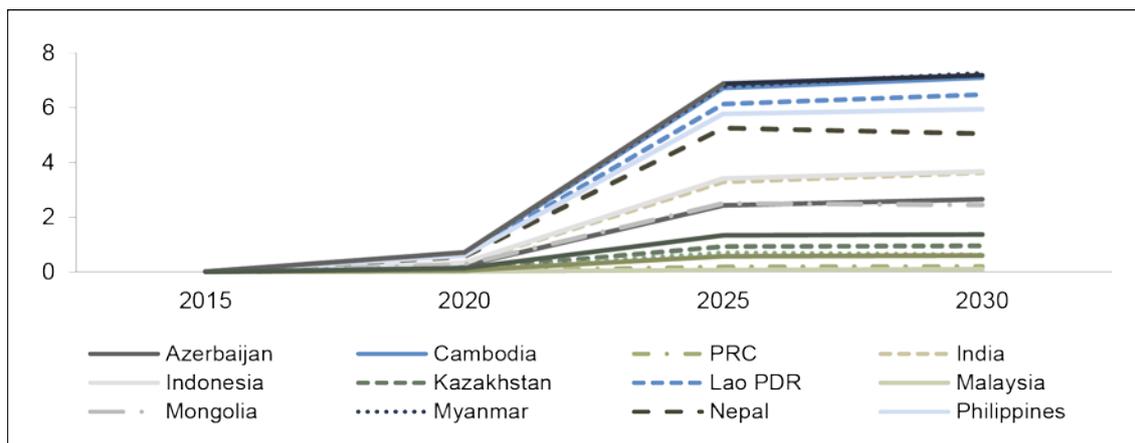
**Figure 2: Social Protection Indicator by Country, 2012**



Source: ADB (2016).

In terms of the estimated resource requirements, ADB’s projections for lower estimates show that Timor-Leste, Cambodia, Myanmar, the Lao People’s Democratic Republic (Lao PDR), and the Philippines have among the highest resource requirements as a percentage of their GDP from 2015 to 2030. ADB’s projections for upper estimates reveal that Nepal, Timor-Leste, Cambodia, Myanmar, and the Lao PDR have among the highest resource requirements.

**Figure 3: Total Estimated Resource Requirements as a Percentage of GDP, Lower Estimates**



Source: Handayani (2018).

Given the huge gaps in coverage and social protection needs, it is necessary to explore other innovative ways of addressing these financing needs. In terms of health insurance, either the market (private health insurance) or the state (statutory health insurance) can provide formal insurance mechanisms.

### 3. LITERATURE ON VARIOUS INNOVATIVE SCHEMES FOR HEALTH INSURANCE FINANCING

A health insurance scheme collects premiums from all its members to cover (parts of) the health care expenditures of those individuals who become sick. Thereby, it applies risk pooling to balance the consequences of each actualized individual risk. All the members of the pool share the health shocks, which are no longer borne by each member individually; this transfers resources from high-risk to low-risk individuals.

According to the OECD, in describing the structure of a health financing system, it is important to look first at the expenditure of health care financing schemes, which pertains to which health care provider purchases which goods and services and how, and second at the type of revenues for the health care financing scheme, which pertains to whether domestic revenues, social insurance contributions, or voluntary prepayments finance the scheme (OECD, Eurostat, and World Health Organization 2017).

In the absence of universal health care, private financing schemes for health insurance can fill the gap. However, a major problem for private financing of health insurance is information asymmetry. In low-income countries, insurers find it very difficult to collect information about the health status of their applicants. If individuals have better information about their health risks, we can expect that there will be more high-risk individuals who will buy insurance. Given limited information, insurers will suspect that high-risk individuals are more likely to enroll, which in turn creates a high-risk profile for them, thereby disincentivizing them from offering fair prices. Such unfair prices then have the consequence of discouraging low-risk individuals, which increases the adverse selection. High premiums, which often become higher as a result of insurers anticipating costs from serving high-risk, low-income individuals, deter both high- and low-risk individuals from buying health insurance.

In this section, we review the literature on various financing schemes for health insurance, with a specific focus on community-based and crowdfunding schemes. In the absence of universal health coverage, a number of developing countries have utilized various forms of community-based schemes to finance the health insurance of the underserved. We have shown in the previous section that there is a substantial gap between the social protection needs and the social protection coverage in Asia and the Pacific. With limited resources and plenty of challenges to development, it is beneficial to explore various ways of financing social protection.

### **3.1 Community-Based Health Insurance Schemes**

#### **3.1.1 Community-Based Health Insurance (CBHI)**

In the 2000s, one of the schemes that rose to prominence among many developing countries was community-based health insurance (CBHI) (Bennet 2004; Carrin, Waelkens, and Criel 2005; Ekman 2004; Ranson et al. 2006; Tarbor 2005). Basically, CBHI is a voluntary, risk-pooling scheme that is community based and managed at the community level. While there is an expectation that CBHI will reduce the out-of-pocket spending of the poor (Ekman 2004), there are still some arguments regarding how this community insurance contributes to the broader health care financing system (Bennet 2004). Carrin, Waelkens, and Criel (2005) noted that the development of CBHI is still in the early stage; therefore, problems, such as the affordability of premiums, trust in the integrity and competence of the managers, the attractiveness of the benefit package and the quality of care, and the limitation of risk pooling due to the small size of the community, are still an enormous challenge. Using a case study from India, Ranson et al. (2006) argued that even a well-intentioned insurance scheme might have an undesirable distributional impact, especially if the scheme does not properly address the community's needs, such as a low level of access to health care providers and complicated reimbursement.

According to Tarbor (2005), CBHI is "any program managed and operated by a community-based organization, other than government or a private for-profit company, that provides risk-pooling to cover costs (or some part thereof) of health care services." Among the benefits of community-based financing arrangements is the ability to facilitate the creation of ownership. Studies have shown that the "degree of ownership and participation that members have in the design and operation of an [insurance scheme] is related to their willingness to accept changes in pricing, coverage and procedures" (Tarbor 2005). However, Bennet (2004) suggested that a CBHI scheme should be part of the national financing strategy and interact with the government financing policy to ensure that the schemes can contribute to the system-wide insurance objective (access to care with financial risk protection) (Kutzin 2001).

One example of CBHI in the literature is the Vimo Self-Employed Women's Association (SEWA) CBHI scheme in India (Ranson et al. 2006). SEWA is a trade union of informal female workers that commenced in 1972. SEWA started an integrated insurance program, Vimo SEWA, for its members, providing life, hospitalization, and asset insurance as an integrated package. SEWA members pay the premium and an additional amount to the National Insurance Company (NIC). SEWA members can enroll their husbands and children, and non-SEWA members can still avail themselves of the insurance provided that they pay the premium plus a nominal fee to become a SEWA member. Vimo SEWA only covers hospitalization expenses up to a certain amount per member per year and leaves the choice of the health care provider to the member; the provider can be private, for profit, non-profit, or public. Members pay out of their pocket and then receive reimbursement from Vimo SEWA.

It is not always the case that policyholders in CBHIS pay out of their pocket and receive reimbursement. There are many types of CBHI schemes. In some cases, the NGO running the scheme is also the health care provider. One example is Voluntary Health Services in Chennai, India (Ranson 2003), in which participants pay an annual premium and in return receive an annual health check-up and discounted rates for inpatient and outpatient services. Another scheme is the third-party payer, in which the NGO is the insurer but not a care provider, which is the most common type of scheme even in usual private insurance schemes. Another is an NGO-intermediated scheme that pertains to the Vimo SEWA described above. In this scheme, the NGO acts as an intermediary between the target population and one of the government insurance companies; in the case of SEWA, it is NIC.

Studies, however, have shown that a number of factors can lead to less than stellar performance, including high start-up costs, as CBHI is costly to establish, requiring detailed feasibility studies, dedicated staff, and the creation of procedures and protocols (Carrin, Waelkens, and Criel 2005). It also falls prey to underpricing, as the problem at the beginning is that many CBHI schemes underprice their operations to attract more clients. This depletes the premiums almost immediately and leads to a vicious cycle of increase, reduced growth, renewals, and slow payments to providers. A lack of information for setting prices, such as data on age, gender, geographic distribution, and out-of-pocket health expenditure, also contributes to the failure of CBHI. Combatting attrition and drop-outs is another problem, as many CBHI schemes experience high drop-out rates given that their target market includes those who otherwise cannot afford private insurance. There are also management-related risks, such as management capacity as well as health providers' hesitation to partner CBHI schemes given the reputation risk. Further, moral hazard, a lack of peer monitoring, adverse selection, and the impossibility of creating varying risk pools are among the common problems that CBHI schemes face (Tarbor 2005). Since the target of CBHI is mostly poorer, less educated, and self-employed people, they have weaker links with promoting institutions and less understanding of how to continue with the program. Therefore, the administrator of the insurance institutions should have continuous contact with the community, especially at the time of re-enrollment, to avoid high drop-out rates (Sinha et al. 2007).

These challenges, which the literature has documented, point to a central issue: sustainable financing. While CBHI remains one of the most effective ways to widen health insurance coverage to include the poorest of the poor, the model itself makes it vulnerable to many risks, making it unsustainable. The main risk apparent in the case of the CBHI model is that it relies only on the premiums paid by its policy holders, and, as it targets those who otherwise cannot afford private insurance, there is a high risk of not continuing the payment premiums.

### **3.1.2 Takaful Insurance**

Takaful is another type of insurance in which members agree to contribute money to a pool system to guarantee each other against loss or damage. This is common in Islamic countries, such as Indonesia. It is different from conventional insurance, in which customers buy a policy for personal security and the insurance company is the risk bearer. Unlike conventional insurance, which transfers the risk to the insurance company, the takaful concept uses risk sharing among members (Kassim 2012). In a takaful insurance scheme, the insurance company earns money based on its performance fee or the sharing surplus (not bigger than the surplus that members or participants receive). In cases in which there is extra money or surplus, it will return to the members or participants. Compare this with conventional insurance, in which the

surplus or extra money from the insurance process returns to the insurance company (Bakhtiari 2013). Apart from the commitment to sharing the risk, takaful insurance follows sharia principles and can only invest in sharia-compliant investment funds.

Even though the takaful concept is based on the mutual concept, only middle- and high-income groups can afford many takaful products. Many factors affect the consideration of insurance institutions, including the affordability for low-income groups and the complicated process to allocate Muslim donations (zakat and sadaqah) to the takaful program for low-income groups (Htay, Sadzali, and Amin 2015). Htay, Sadzali, and Amin's (2015) research suggested that takaful for the poor (micro takaful) will be viable if the product is part of the corporate social responsibility of big companies rather than individual operators.

*Micro takaful*, on the other hand, is a type of microinsurance using the takaful principle (Brugnoni 2012). Unlike conventional takaful, this type of microinsurance adheres more to the cooperative principle than to takaful itself and utilizes donations (in terms of zakat funds) rather than contributions from members. Furthermore, micro takaful aims to be simple, affordable for the poor, and easy to access (Ahmed 2016). In this case, then, it is more plausible for micro takaful to cover individuals who otherwise cannot access other private schemes given the high premiums. In short, micro takaful is useful for covering high-risk, low-income individuals, as this type of insurance will cover similar groups of people who face similar risks, such as risks related to health, death, education, housing, and agriculture. In some countries, such as Indonesia and Malaysia, micro takaful operates as an extension of government assistance or bigger insurance companies. For example, Peramu in Indonesia collaborated, using the agent partner model, with Takaful Indonesia and Payung Keluarga with Germany Allianz as an underwriter, and in Malaysia the Farmers Welfare Federation of Malaysia launched Takaful Ikhlas with partial funding from the Malaysian government.

Research has shown that micro takaful can alleviate poverty and contribute to achieving the Sustainable Development Goals (SDGs). It has also mentioned that the implementation of micro takaful can promote entrepreneurial education and training, skill building, asset accumulation, self-reliance, and communal services, since the institutions will empower local communities' sources (Usman and Tasmin 2016). The biggest advantage of micro takaful is this model's ability to utilize donations through zakat and sadaqah in addition to the low premium that the participants in the insurance pay (Brugnoni 2012). However, the micro takaful model faces similar challenges to CBHI.

### **3.1.3 Cooperative Insurance**

This concept of microinsurance was popular in the People's Republic of China in the 1960s and 1970s under the name of cooperative medical schemes (CMSs). However, CMSs worked as health cooperatives rather than health insurance (Wang and Liang 2017). The most interesting feature of CMSs is that the health workers and community members (in this case mostly farmers) mingle and help each other in their daily activities, thereby promoting better awareness of various health issues among the community. In addition, the health workers have information on the health issues that the community faces and can effectively anticipate the health concerns that might spread through the community. Nowadays, the practices of cooperative insurance are present all over the world, including in Japan and the United States.

Similar to takaful insurance, the patients or members own CMSs. The more members an insurance institution has, the more it can spread the cost over all its members, meaning that the per unit cost will be lower. Cooperative insurance does not intend to make profits, so the costs are real costs and not inflated administrative costs. Cooperative insurance usually does not have tax liability, because it only collects what it spends, which can lower the costs even more. Members who have something in common usually form the institutions, such as a group of farmers, start-up companies, or local hospitals. One positive advantage of this type of collaboration is that insurance companies that employ CMSs have a better position in negotiating with health providers due to an usually large number of participants. However, the disadvantage is that, if the insurance company runs out of money, CMSs do not follow the same procedure as conventional insurance, which has a safeguard regulation in place.

## 3.2 Alternative Financing

### 3.2.1 Crowdfunding

While the previous examples focus specifically on community-based schemes to provide health insurance, hometown investment trust (HTIT) funds and crowdfunding are not limited to health insurance. At their core, HTIT funds and crowdfunding are ways of pooling funds to finance various projects. Let us begin with crowdfunding.

Crowdfunding is a method of pooling funds. Crowdfunding is comparable to fundraising except crowdfunding often commences following an open call on the internet for financial resources. Many web-based platforms facilitate crowdfunding, such as *kickstarter*, *gofundme*, and *indiegogo*, to name a few. The type of the crowdfunding is categorizable based on the purpose, such as profit or non-profit.

Non-profit crowdfunding is usually based on donations or rewards, while profit-oriented crowdfunding is based on lending or investment. Donation-based crowdfunding is generally for charity projects, and therefore there is no monetary return for the funders. In reward-based crowdfunding, funders receive a product or a service in return for their financial contributions. In the case that the reward is in the form of a product, the entrepreneur may or may not gain a profit from the production process. However, the entrepreneur's profit margin will not affect the reward that the funder receives as long as the entrepreneur successfully delivers the product. In profitable crowdfunding, the funders expect monetary value as a return on their financial contribution. In lending crowdfunding, the return is in the form of an interest rate. Furthermore, in investment-based crowdfunding, the funders become equity investors who receive shares in the company and become part of its ownership.

There are three main actors in a crowdfunding mechanism: the entrepreneurs, the crowdfunding platform, and the crowd (or community). The process starts when the entrepreneurs or capital seekers present their projects to the general public using an intermediary or a crowdfunding platform such as *kickstarter* or *gofundme*, as mentioned earlier. Thereby, the capital seekers agree to comply with the standards or regulations that the platform sets. The platform acts as an intermediary to assist and disseminate information about the projects and the capital needed to the public.

In the Philippines, one example of a crowdfunding scheme is *FarmOn.ph*, which aims to support farmers. On this platform, anyone can join in virtual farming and invest money to support farmers in tilling the land and harvesting the crops. Sales from the harvest generate investment returns for the people who invested. *FarmOn.ph* currently owns 96 hectares of farmland property located in Isabela and Quirino Province in the Philippines, which are then farmed. *FarmOn.ph*'s partners and local farmers manage these farms.

They also work closely with the Department of Agriculture, which provides advice on soil management, crop protection, environmental sustainability, farm diseases, and harvesting.

Similar to an investment trust fund, *FarmOn.ph* offers two types of investments. In *FarmOn 1.0*, *FarmOn.ph* begins a new project every planting cycle. Investees can choose which projects they want to support. Investees can choose a farm and then a crop in which they want to invest. The rate of return and length of time it takes to receive the rate of return vary per project (or per crop). Compared with *FarmOn 1.0*, in *FarmOn 2.0*, a fund manager distributes the investments from investees to different projects. According to *FarmOn.ph*, the aim is to address a number of issues that the scheme encountered in its earlier years: some investees worry about the limited rate of return, as some crops may perform well in some cycles, require too much time from investees as investees have to be alert to when a new project opens so they do not miss out on investing, and, with investees' choice in certain planting cycles dictating investments in *FarmOn 1.0*, during the off-season, investments remain dormant. Hence, for instance, in *FarmOn 1.0*, most of the farms are not available for investments as this period is currently outside the cycle, but *FarmOn 2.0* remains open for investments.

The scheme considers people who invest to be members of the community, and they acknowledge the risks involved in their investments, such as natural disasters and climate-related risks. Currently *FarmOn.ph* offers two types of investments.

### 3.2.2 Hometown Investment Trust Funds

Now let us look at hometown investment trust (HTIT) funds. In Japan, a similar concept called HTITs finances small and medium-sized enterprises (SMEs) as well as various projects, including energy projects (Yoshino and Kaji 2013). This type of trust fund operates in many business industries, such as the music industry and 'securities' disaster area support funds. The major advantages of using HTITs are: (1) the off balance sheet; (2) risk tolerance; (3) independence (silent partnership); (4) direct participation; and (5) the possibility that investors could become consumers (Shiozawa 2013).

Like other Asian countries, Japan uses a bank-centered financial system following the Basel Capital Requirement. Given that, there is general reluctance among banks to lend capital to SMEs due to the high risk. Even though some banks provide SMEs with loans, the loans have relatively high interest rates to compensate for the risk of loan defaults, leaving very limited financing options for many SMEs to start or expand their business (Yoshino and Taghizadeh-Hesary 2017).

HTITs, on the other hand, offer the funders a type of silent partnership, in which they can act as customers or shareholders (equity partnership). Some HTITs also organize donations for the pooling funds. Although banks can market or sell HTIT funds, either the bank or the HTIT will have the financial performance of proprietors of the HTIT fund on their balance sheet. This means that it is not part of the calculation of the Basel capital requirement. The bank as the marketing entity and the HTIT fund as the agent receive a fee from the HTIT transactions and services delivered to customers and proprietors (Yoshino and Kaji 2013).

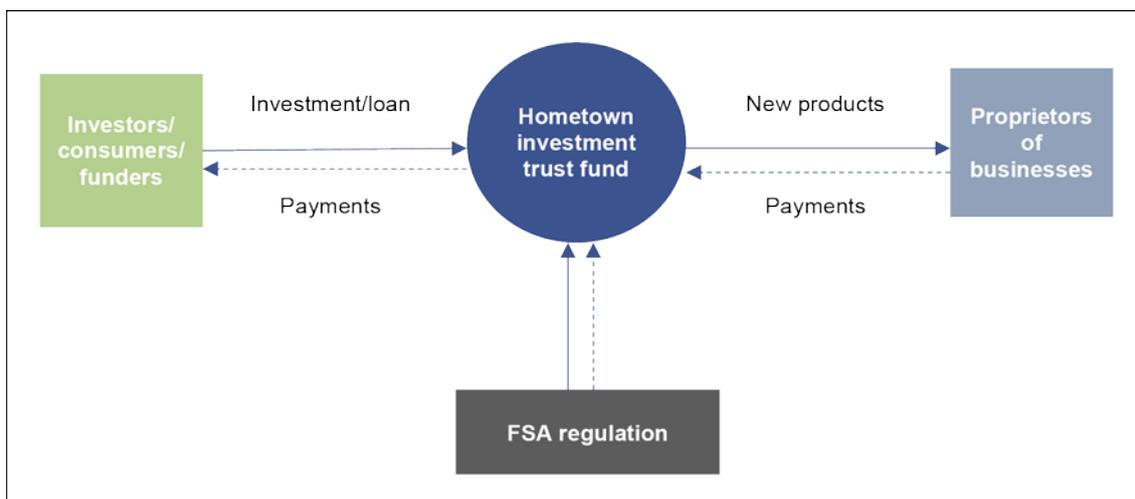
Similar to ordinary crowdfunding, HTITs act as a crowdfunding platform that pools funds to finance various projects aiming to earn a profit. An HTIT fund, however, is a for-profit crowdfunding scheme. The HTIT model in Japan has four components: the investors/consumers, the HTIT operations or the crowdfunding platform, the proprietors of businesses, and the government body that regulates the HTITs. In the case of Japan, it is the Financial Service Agency (FSA). The FSA registers HTITs in Japan and regulates

them as Type II Financial Instruments Business Operators (Komatsu 2013), meaning that it categorizes them as businesses with activities for the sale or solicitation of securities with low liquidity.

When investors pool funds in an HTIT, the HTIT enters into an operating agreement with the proprietors or owners of businesses and manages the documentation as well as the assessment of business proposals of those who want to borrow from the fund. When the offers are launched, the HTIT operations become responsible for mediating the silent partnership agreements, stakes, and dividends. After launching, the HTIT operations work to monitor the business and conduct voluntary surveillance work for accounting purposes. In Japan, customers and investors can monitor the progress of their fund through dedicated HTIT web pages. When reaching the term of redemption, the proprietors will transfer funds to the HTIT accounts and distribute them among all the investors. The HTIT operators can then receive fees or commission for the service provided to investors and proprietors (Komatsu 2013).

What is interesting about HTITs is that the investors or funders become the consumers, making the process more circular and thereby enforcing the sustainability of the scheme. As in the case of Japan, where HTITs operate in communities, the investors and business owners tend to be in close proximity to each other. Therefore, the investors themselves have first-hand information regarding the state of the business. In places where the businesses that HTITs fund are in the areas where the investors originate, the investors themselves become consumers. Having first-hand information about the state of their funded businesses encourages investors to support the businesses, thereby creating ownership. Further, higher profits for the businesses translate into better returns for the investors, creating a cycle of positive returns. Such first-hand information also provides investors with apt knowledge to assess which businesses to continue to support. Further, with the use of information and communication technologies, the products and services of businesses that borrow from HTITs can reach a wider market, creating better profitability and long-term viability for these businesses.

**Figure 4: HTIT Model**



HTITs in particular have not yet financed social protection projects, in particular health insurance. Though we have seen the use of crowdfunding for such purposes, we have yet to witness the real impacts of crowdfunding for financing health insurance. In many cases, as with the crowdfunding platforms that we mentioned above, fundraisers for health assistance tend to be personal, meaning that someone who has an illness and has no resources to pay for his or her treatment can create a crowdfunding page. The problem, however, is that it relies heavily on donations, and, with so many individual fundraisers, there may not be enough resources to cover all personal fundraisers. Such independent fundraisers who rely on donations also assume that funders understand the sickness or the need for a fundraiser in the first place. HTITs work as a crowdfunding platform, but, as they are geared for profit generation, they have the added mechanism for assessing the business proposals of all fundraisers.

## **4. EXPLORING VARIOUS MODELS FOR FINANCING HEALTH INSURANCE USING THE HTIT MODEL**

The discussions above showed that the main problem of the existing models is the sustainability of financing. Following the OECD's classification, financing can come from government revenues or private contributions (OECD, Eurostat, and World Health Organization 2017). However, as the various examples indicate, in the absence of universal health coverage and government subsidies, relying on private contributions becomes unsustainable, especially for low-income, high-risk households. In this section, we therefore explore ways to finance health insurance sustainably by combining the benefits of community-based models of health insurance, such as CBHIs and takaful, with profit-generation models, such as crowdfunding and HTITs. We propose two models of financing for health insurance utilizing the benefits of the HTIT model.

### **4.1 The Two-Step HTIT Health Insurance Model**

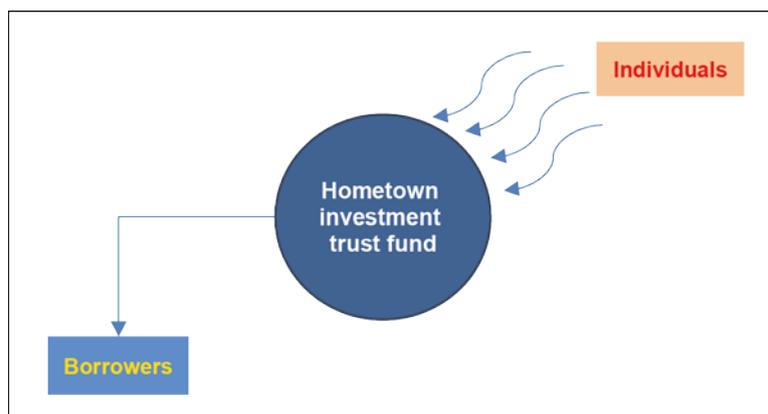
This model describes a two-step process that shows how HTITs can finance micro-health insurance.

*Step 1*, as Figure 5 shows, has three components: (1) the individuals who contribute money to the pooling fund; (2) the pooling fund or the hometown investment trust fund; and (3) the borrowers.

Assume that members of Community A establish the pooling fund and organize it through crowdfunding (HTIT), in which individuals who are interested in investing in Community A can contribute to the fund. In line with the usual for-profit crowdfunding scheme, this means that individuals can come from anywhere and can contribute any amount to the pooling fund with the intention of earning returns from their investments. The fund defines its goal from the beginning, and that is to be a source of financing for small business owners for Community A. From the establishment of the fund, it can specify that, to qualify for loans, businesses should be care-related businesses, for instance pharmacies, flower shops, or restaurants around or near hospitals. Community A oversees the HTIT operations, and members of Community A who need financing for their business proposals can then borrow from the fund.

As the businesses are also based in Community A, they put a series of informal checks and balances in place. Consumers also come from Community A and as such can provide feedback with regard to the quality of the goods or services that the businesses that borrow from the fund produce. This also ensures that the businesses have a steady stream of customers, because the customers who live in Community A also contribute to the fund and have a personal interest in increasing the rate of return of their investments in the fund, turning investors into new consumers. Further, other investors who do not live in Community A have a personal interest in ensuring that the businesses in which the pooling fund invests perform well and survive.

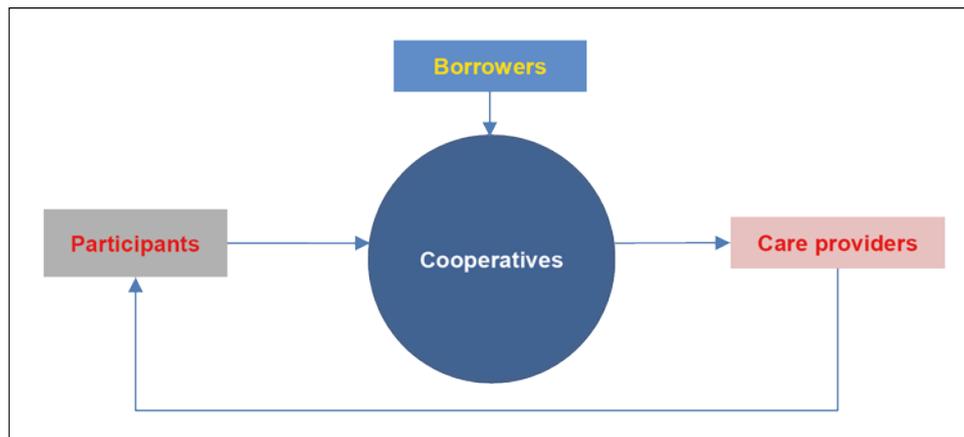
**Figure 5: Model 1: The Two-Step HTIT Health Insurance Model (Step 1)**



The utilization of information and communication technologies (ICTs) can also serve to boost the income of these businesses, as it can expand their market and move the sales of goods and services beyond Community A in which they are physically located. As the businesses that members of Community A own, which the HTIT finances, grow, Step 2 commences.

*Step 2*, as Figure 6 shows, involves borrowers from Step 1 pooling together a fund to establish a cooperative that provides micro-health insurance to the members of Community A, called participants in this model. Borrowers can also establish the pooling fund on behalf of their employees. Participants pay a premium that is then combined with the pool to purchase products and services from care providers. Cooperatives negotiate with care providers regarding the coverage scheme. Furthermore, cooperative insurance manages the pooling fund and, like any other insurance, makes low-risk investments, such as government bonds or time deposits, in accordance with the health profile of the participants.

The first model, while it takes time to reach a functional level to start providing the members of the community with health insurance, is less risky, as it focuses on first generating enough money to pool to ensure that the provision of health insurance remains sustainable. We explore a different model below that still builds on the benefits of HTITs while utilizing the success of attracting funds using internet-based and crowdfunding platforms.

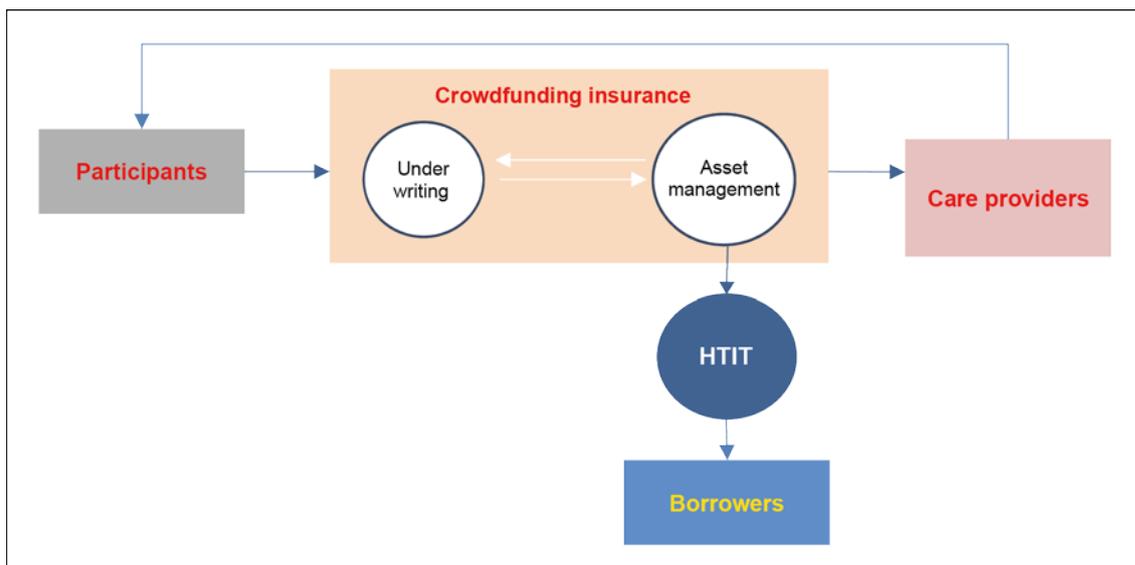
**Figure 6: Model 1: The Two-Step HTIT Health Insurance Model (Step 2)**

## 4.2 The Integrated HTIT Health Insurance Model

This model has five components: participants; micro-health insurance operations; care providers; an HTIT; and borrowers. Unlike the previous model, this model begins with the establishment of the micro-health insurance model in Community A. This insurance model is an adaptation of the *takaful* insurance model, in which members of Community A agree to guarantee each other and contribute (a premium) to a pooling fund. Unlike Model 1, however, contributions to the fund can be both for-profit and donations. The amount of the contributions depends on the type of coverage of each individual. The insurance and crowdfunding operations will collect information to ascertain the risk levels of the individuals in Community A properly and define the nature of the risk and the period covered. As the insurance is based at the community level, the collection of these data will be less costly, as it is easy to validate them. This solves one of the main problems that CBHI encounters: data are often limited, preventing CBHI companies from properly assessing the risk levels of individuals. As the people managing the insurance operations will also come from Community A, validating the data collected will also be possible and levels of risk easier to assess.

The insurance operations will then manage the fund on behalf of the policy holders or participants as well as the fees and commission based on its performance. The pooling fund fulfils any claims that the participants make, and any remaining surpluses, after making provisions for the likely cost of future claims and other reserves, belong to the participants in the fund, who may receive them in the form of cash dividends or distributions or alternatively in a reduction of their future contributions. Different from the *takaful* insurance model, however, the proposed insurance model will benefit from the HTIT concept, in which the investees are known to the investors (policy holders or participants).

The insurance operation also establishes an asset management unit that facilitates surpluses and pools them into an HTIT to make them accessible to business proprietors from the same community. It is possible to establish a number of HTITs, depending on the performance of the fund, and to identify the purpose of the pooled fund; for example, a fund is only available for loans to businesses related to care provision, such as business activities related to hospitals or health care service facilities, for example hospital catering and restaurants, suppliers for health equipment, flowers, cafes renting spaces in a hospital complex, and bakeries, among others.

**Figure 7: Model 2: The Integrated HTIT Health Insurance Model**

We have explored two models utilizing HTITs to finance social insurance. The reason for exploring HTITs as a viable way of financing social insurance is that health insurance provision is a big challenge and in many cases its financing is unsustainable. Incomplete information, adverse selection, and management issues all contribute to the failure of many social insurance schemes for the poor. In the absence of universal health insurance and the failure of many public and private insurance schemes to cover high-risk and low-income individuals, HTITs offer a sustainable way for insuring them. Unlike other investment schemes, many individuals with limited incomes do not feel the need to invest in their health, as there are no “returns” (returns pertaining to whether one will use the insurance). Individuals who have no complete information about their health often perceive the odds of becoming sick and needing insurance to be low. Therefore, they often view investing in their health as unnecessary. Utilizing the HTIT concept of investing in SMEs creates a circular relationship whereby policy holders can expect a return on their investments in their health. Further, investing money in SMEs also produces an added benefit of creating livelihood projects for the members of the community.

Another benefit of utilizing HTITs is that, similar to other community-based financing arrangements, it can facilitate the creation of ownership, which is important in ensuring the sustainability of the financing scheme. Studies have shown that the “degree of ownership and participation that members have in the design and operation of an [insurance scheme] is related to their willingness to accept changes in pricing, coverage and procedures” (Tarbor 2005). Further, as the HTITs can facilitate the creation of SMEs, ownership of these businesses within the community intensifies, converting investors into consumers and ensuring that the businesses have a steady stream of consumers who are willing to pay for their products and services and in turn ensuring that the businesses can steadily pay back the amount that they borrowed to the HTITs, meaning that policy holders, when they become sick, can receive payments for their hospitalization needs.

A weakness that might come from the integrated HTIT health insurance model is the characteristic of the risk tolerance of HTIT funds. HTITs are an alternative solution for SMEs before they are eligible for credit from banks. Due to the strict Basel capital requirements, banks tend to lend money to large corporations that are already included in credible rating agencies. They consider SMEs as a high-risk business for bank credit due to the lack of data on their financial condition. Therefore, if an insurance scheme invests its pooling fund in SMEs through HTITs, from the conventional perspective of the insurance investment concept, the pooling fund will face higher risk. However, there are some advantages of this concept that can enable the insurance company or the HTIT to manage its risk:

- Following the HTIT model, the insurance company, insurance participants, HTIT, and borrowers (SMEs) live in the same area and community, and they know each other. Building on the concept of cooperative insurance and microinsurance, the stakeholders mingle and know which services and products are necessary for their towns. Furthermore, they know who the borrowers are and what their business activities are. Therefore, they can have complete information on the perceived profitability of the businesses.
- HTITs can require borrowers to provide information about their businesses and disclose at least the most important information, such as the net income, short-term assets, liquidity, and capital (Yoshino and Taghizadeh-Hesary 2015). Since they live in the same community, it is easier to set up guidelines and standards that are acceptable and enforceable.
- The asset management of the insurance companies will set up some requirements for their investment that HTITs need to follow (Yoshino and Taghizadeh-Hesary 2014). They could also restrict investments to health care service-related areas, such as catering for hospitals, restaurants, mini markets, or suppliers of health equipment.

## 5. CONCLUSION

Research has shown that spending on education, health care, and social protection can accelerate the effort to achieve poverty reduction. Specifically, effective health care systems can help countries to prevent households from sliding into the poverty trap. The geographical inaccessibility and unaffordability of health care services are the main challenges to improving health care coverage and meeting other social protection needs.

Huge needs and limited financing have prompted people and societies to think about alternative financing methods. The rapid advancements in technology have allowed alternative financing schemes to emerge, such as internet-based pooling funds to finance medical needs for some people whom the national health system does not sufficiently cover. This concept has also found its way into other areas of human life, such as disaster management, education, and creative industries.

This paper explored new and innovative ways of financing social protection needs, especially to improve access to health care services for poor and marginalized communities. This paper evaluated various alternative community-based health insurance mechanisms for social protection, such as CBHIs, micro takaful, and cooperative insurance as well as various for-profit alternative financing schemes, such as HTITs and crowdfunding. We found that there is merit in exploring alternative financing schemes to be able to address the biggest hurdle to achieving the SDGs:

sustainable financing. We married community-based health insurance schemes, such as cooperative insurance, with alternative financing mechanisms, such as HTITs, to offer sustainable ways of financing health insurance. While there is a need for further research to enhance our understanding of how the HTIT concept can integrate better with a social protection scheme, it is important to highlight the benefits of combining the HTIT financing scheme with micro-health insurance.

*Sustainability.* There is an expectation that the HTIT microinsurance concept will improve the issue of sustainable financing of other micro health insurance concepts. As we discussed above, high drop-out rates of policy holders and participants in the long term is the main challenge among many community-based health insurance schemes. By using the HTIT financing model, the participants can expect to have some returns (aside from the not easily understood and appreciated returns on health) in the future based on the performance of the pooling fund.

*Reduce the risk of information asymmetry.* The health insurance model using the HTIT financing concept can avoid the risk of information asymmetry that other types of health insurance models usually face. The borrowers (of the pooling fund through the HTIT) cannot escape from the community or hide important financial information from the participants (community).

*Stimulate economic activities.* When the community is healthy, businesses can grow, stimulating economies to develop faster. Looking into the future, we can say that, when SMEs have a better credit record, they will be eligible to borrow from banks and expand their business. Accordingly, HTIT-based micro-insurance companies will have more participants or policy holders from SMEs, and that can lead to a bigger pooling fund to invest and stimulate the economy even more.

While these are all exploratory, in light of the problems with sustainable financing for health insurance schemes, such concepts may be worth exploring and developing.

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