

# **EMPATHY DRIVEN FUNDING**

New frontier of financing small businesses











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### Chapter 1: A case study of funding product development (Micro Investment Crowdfunding, K City, Hokkaido)

A confectionery company based in K City, Hokkaido, successfully funded development of a new product through Micro Investment Crowdfunding after the local financial institutions denied it a corporate loan to finance the project.

## **1.1** Overview of K City<sup>1</sup>

K City is situated in eastern Hokkaido on the Pacific coast. Its population is 175,000 as of the end of October 2016. Affected by a cold current, the climate is generally cool with an annual average temperature of 6°C, reaching 20°C in summer and -5°C in winter. The annual precipitation is around 1,000 millimeters, and by the mid-winter the snow can reach 30 centimeters.

The main economic sectors are tourism (with two national parks), wholesale trade and retail trade. The gross municipal product for FY 2012 was JPY 576.4 billion [USD 5.0 billion], with tourism and trade accounting for 23% and 15%, respectively. About 7.3 million tourists visited K City in FY2015, which is an 8.3% increase from the previous year. The primary sector is also strong, mostly represented by dairy farming, forestry, relying on abundant resources, and fisheries, with one of the biggest production volumes in Japan. Local products such as seafood and dairy products are popular among the tourists. The only coal-mining facility in the country, food-processing and pharmaceutical plants, and paper mills also operate in K City. However, consumption and employment are shrinking, and the economy is on a declining trend in line with the decrease in population.



#### FIGURE 1 OVERVIEW OF K CITY

<sup>1</sup> K City Directory 2016 (<u>http://www.city.kushiro.lg.jp/common/000092673.pdf</u>)

## ♦ 1.2 Case overview

The fundraising scheme used in this case study is shown below. The main success factors for this case are A) utilizing the Support K City Fund scheme led by the local government (K City municipal government), and B) the attractive fund design proposed by the crowdfunding operator Music Securities (herein after referred to as 'MS').

FIGURE 2 FUNDRAISING SCHEME OF F CORPORATION CO., LTD. (HEREINAFTER REFERRED TO AS 'F CORPORATION')



(Created by author)

## A Support K City Fund (K City municipal government)

The 'Support K City Fund' scheme led by the K City municipal government, which is one of main factors of successful fundraising, is explained first.

**1** Issues recognized by the municipal government.

K City is located far from major cities and the means of transportation are limited. The population is approx. 175,000 people, forming a small market. Like in other smaller cities, the local industries are on a declining trend and the local purchase rate and product sales are also shrinking due to the outflow of human resources from the city to the prefectural capital and other major cities, aging of the population and a declining birth rate.

In this context, the following concerns were raised by K city; i) an outward flow of goods, ii) a lack of human resources to support the city, and iii) an unfavorable working environment<sup>2</sup>.

As a response, the municipal government promotes specific measures to

<sup>&</sup>lt;sup>2</sup> K City Management Policy Plan (<u>http://www.city.kushiro.lg.jp/machi/t\_keiei/page00010.html</u>)

steer the city's self-sustained growth based on four 'visions' that were formulated in the strategic city management plan in 2012.

Based on one of the visions, "increase the value of local resources and circulate its local economy", the city targets to "earn from outside the city". The strategic measure it took was to promote high value-added local products to attract tourists from outside of the city.

Meanwhile, the scarcity of financial services for the local small businesses became a bottleneck to the city's development strategy. Loans from the local financial institutions were the only way for local small businesses to obtain capital, and there was no venture capital. In other words, even if the small businesses wanted to develop a new product, financial access was limited due to the conventional ways of loan proposal assessment by the local financial institutions.

#### **2** Background of the Support K City Fund project

Recognizing the issues described in A) (1) above and based on the best practice of the Furusato investment fund in Hyogo Prefecture (the "Kirari Hyogo Project"), K City's municipal government carried out a feasibility study in FY2014 to establish "Citizens' fund" in K City, jointly with K City Public University's Research Center for Regional Economies and K City credit union, to create a new financial channel for local development. In the following year of the research, the "Support K City Fund project" was launched. The project utilized a Micro Investment Crowdfunding mechanism to raise funds for small businesses which have their headquarters or branch offices in the city. As an official K City's Partner, MS provides a Micro Investment Crowdfunding platform for fundraising. It encourages individual investors to make small investments under an anonymous partnership agreement.

## **3** Structure of the Support K City Fund project and the role of K City municipal government

In March 2015, K City municipal government signed an agreement with local organizations, financial ins titutions, universities and other educational and research institutions of the city to jointly promote the Support K City Fund. The municipal government suggests candidate projects for the fund, while K City Public University's Research Center for Regional Economies provides advice and supervision at the selection stage. To be qualified, the project must i) have some unique local features (25 points), ii) must resonate with people (15 points), iii) be highly attached to K City culturally, economically, historically, etc.: (10 points), and iv) be feasible economically (50 points). Following the qualification done by the city, MS reviews the selected small businesses. Once the

projects/small businesses are approved for the fundraising on the platform, the municipal government provides a subsidy to cover 90% of the initial fund arrangement fee amounting JPY 900,000 [USD 7,826] so that the selected small businesses just pay 10% equivalent to JPY 100,000 [USD 870]. The municipal government allocated JPY 5 million [USD 43,478] to finance up to five projects in FY2016<sup>i</sup> to secure support to K City Support Fund and intends to continue this subsidy support on a continuous basis to stimulate the local economy.

When the Fund was launched, there were only three candidates, and two of them were selected as the pilot in the first year (FY2015). The low number of applicants showed that there was little understanding for Micro Investment Crowdfunding mechanisms among the local small businesses. Realizing this, the municipal government organized seminars to promote a better understanding of the Micro Investment Crowdfunding scheme and worked actively to raise awareness and enhance the use of Support K City Fund.

#### **4** Objectives of K City municipal government

The K City municipal government expects that Support K City Fund will widen financial channels for the local small businesses, especially for those that have a growth potential that may lead a local economy's revitalization, but do not currently qualify for loans from the local financial institutions.

It is important for the projects that seek financing through the Micro Investment Crowdfunding to have a unique local flavor and to provoke investors' empathy. Provoking the investors' empathy in the process of fundraising helps a small business acquire core customers who live outside the region. This matches the vision of "earning from outside" which is a part of the strategic city management plan.

#### 5 Continuous use of Micro Investment Crowdfunding as a financial channel for MSMEs

As the small businesses that were selected for the pilot case of the Support K City Fund gave positive feedback, the municipal government intends to continuously provide subsidies to the fund. However, the municipal government recognizes the following issues to be improved;

#### **⊘** Application opportunities

Currently, the application opportunities are only once a year. Applications should be accepted throughout the year to match the needs of small businesses.

#### ⊘ K City business profile

Many businesses in the city are B2B-oriented, while fewer small businesses manufacture B2C products. As funds are raised from individual investors on Micro Investment Crowdfunding platform, B2C is preferable for small businesses to appeal their products to investors, win empathy, and increasing the chances of successful fund raising. Most products of K City are raw materials, and to differentiate themselves from neighboring regions, the local small businesses need to create unique and high value-added products.



#### FIGURE 3 SHARE OF WHOLESALE (B2B) AND RETAIL (B2C) IN PRODUCT SALES

#### Dissemination of information on Micro Investment Crowdfunding

Unfortunately, Micro Investment Crowdfunding is still lacking recognition among local small businesses. It is essential to ensure a better understanding of this useful financial scheme, particularly to reach out to small businesses with growth potential. Collaboration with the local financial institutions can help to gain a wider recognition of the functions and the potential of Micro Investment Crowdfunding. And it is important to note that local financial institutions can benefit from cooperating with Micro Investment Crowdfunding because the latter helps create future customers for the local financial institutions.

#### **⊘** Costs of Micro Investment Crowdfunding

The total costs to raise funds through Micro Investment Crowdfunding include auditing fees, financing and operational costs, which amount to roughly 20% of the total of fund. This is a considerable amount for small businesses. To respond to the needs of small businesses, the municipal government also considers other fundraising options, like pre-purchase crowdfunding which may be more affordable for small businesses.

<sup>(</sup>Source: K City "City Directory" 2016)

## **B** Success factors of the crowdfunding design by MS.

The design for this case is one of the key factors. This fund is well-designed to reach the necessary target amount, provide the expected financial returns or minimize the risk of loss of principal.



#### **1** Profile of a small business applying for fundraising

Below is the profile of F Corporation, the confectionary company in our case study.

#### **TABLE 1** OVERVIEW OF THE F CORPORATION

AREA OF BUSINESS COMPANY NAME HISTORY	K City and N City, Hokkaido (Northern Island of Japan) F Corporation Co., Ltd. The CEO of F Corporation was born in a family of a confectionery-maker; he graduated from a confectionery school in Japan and had apprenticeship in France before opening his first shop, F shop in N City, in 1997. He opened his second shop in N City in 2010 and the third one in K City in 2012. He converted his business into a joint-stock company in 2011.
BUSINESS PROFILE	It manufactures an excellent cheese cake, Swiss rolls and other Western-style sweets made with the local dairy products (milk, cheese, butter and eggs) and natural water of Mashu Lake in Hokkaido, where its climate is similar to dairy regions in France. It mainly sells in K City and N City, as well as online and in some events at department stores across Japan. It recently started collabora- tion with a Singapore-based trading company to to expand its business over- seas.
BUSINESS SCALE	The sales in FY2015 were JPY 84,488,000 [USD 734,678] (before fundraising), while the capital is JPY 10,000,000 [USD 86,957] (according to K City Industrial Information Network's website, year unknown). The company employs about 20 people.
FINANCIAL CONDITION AND BUSINESS RESULTS	As F corporation is not a listed company, the financial results are not disclo- sed. (However, according to the interview and the information from MS's web- site, when it applied for financing, its debt exceeded its assets.) Although the sales have been continuously growing, profits are small due to investments into facilities and increase of materials and employment costs. The working capital is mostly replenished with loans from the local credit union.
MAIN CORRESPONDENT FINANCIAL INSTITUTION	K City credit union



#### **⊘** Financing needs for a new product development

The sales of F Corporation in the N City and K City account for 70% of the total, and it is considered as one of the popular local confectionery shops. Sales have been gradually increasing according to the growth of the number of stores and the scale of business follows its increase in parallel.

As the next step, the company plans to advance into a new market outside of Hokkaido and overseas. On the other hand, it also recognized financial needs for a new product development which is outstanding and high-impact to win new consumers.

#### ⊘ Negotiating a loan with a local financial institution

Although F Corporation has a financial institution with a long relationship, it unexpectedly failed to obtain a new loan.

Looking at the MSME inspection manual compiled by the Financial Services Agency (FSA), the loan application might have been rejected due to the debt levels that exceeded assets, and in addition, there was a difficulty to evaluate the potential gains from sales of the new product that the company wanted to develop.

The FSA inspection manual demands that financial institutions develop a proper credit rating system to assess and measure the credit risk appropriately based on the business scale and characteristics, and the company's risk profile. It stresses importance of assessing the overall condition of the borrower's business, as MSMEs are likely to be affected by fluctuations in the economy.

It also says that the "credit rating of MSMEs in particular shall be decided not only based on their business situation, but also in consideration of i) company's technique, sales capacity, potential growth, ii) payment status of compensation, income, asset components of CEO or board members, iii) guarantee situation and capability in addition to their financial situations", and demands financial institutions to classify MSMEs into the following **three categories:** 

#### Normal debtors

*Debtors whose business performance is good, no serious financial problems* 

#### • Debtors under caution

Debtors that require caution: debtors which have problems meeting the lending terms, including reduction, exemption or shelving of interest, delays in payment of principal and/or interest, as well as the debtors whose business performance is poor and/or unstable due to financial problems.

#### • Debtors under possible bankruptcy

Debtors that are in a very difficult situation with little progress on the corporate improvement plan and are possible bankruptcy in the future (including debtors receiving special support from financial institutions etc. on an on-going basis). More specifically, this refers to the debtors that are possible bankruptcy as their debts exceed their assets, their business performance is poor, loan payments are overdue, which threatens the full repayment of principal and interest and is likely to result in losses for the lender.

F Corporation had more debts than assets and was very likely regarded as a company with financial problems, and not as a normal debtor. In addition, the purpose of borrowing was not to replenish working capital but to finance new product development. In such cases, the following points must be carefully examined in assessment of the **borrower's production and sales capacity:** 

- Estimates of orders for the new product based on the patents, utility model rights, trademark rights, copyrights and other intellectual property rights owned by the company and employees
- Business plan based on the new product/service development and its sales.
- Media reviews for current products/services in their business field.
- Trends of market size and growth of shares in the business field for product/service.
- Evaluation and situation of sale destination and product source, superiority of sales and product source conditions against competitors.

As F Corporation did not have a leading product, it was not clear whether if a new product would gain popularity. As the good sales in the department store were mainly with temporary events, the company is regarded that they didn't have a clear sales channel to expand its business, and the purchase condition was not favorable due to the increase of material costs. Those factors are assumed as the reasons for the rejection of a loan from the financial institution.

#### ⊘ Utilization of Support K City Fund and MS's idea to increase "empathy" of the Fund.

When F corporation was facing difficulties to obtain a loan, K City Chamber of Commerce and Industry introduced it to the Support K City Fund, and the company decided to apply for support. The company made a presentation including its business plan, accounting statements and other necessary information to the municipal government and MS that were in charge of assessment. The CEO of F Corporation emphasized a possibility of new product that it may contribute to K City's economy by using local ingredients with a high quality. He also explained the need for expanding the business outside, as the local market was shrinking. The CEO pointed out that the company needed a leading product while lacking the marketing and financial channel for the business growth. The company's challenges were consistent with the view of the crowdfunding operator MS. In this process, MS reviews "empathy" and "business plan" with the following points; if the fund has enough potency to mobilize micro finance from individual investors and if their business plan is sustainable throughout fundraising period. A story behind the project is the key to attract and motivate investors. In this case, to strengthen the fund's "empathy", Mr. Oki Sato from Design office nendo, a globally famous designer, was introduced by MS's CEO, Mr. Komatsu's suggestion, to ensure the new product was more attractive. This series of collaborative fund was named "Finan-Sense" (finance + sense) and F corporation's fund turned to be the first case for "Finan-Sense" (finance + sense).

#### **3** Crowdfunding fund design

Below is a summary of MS's Micro Investment Crowdfunding design.

#### **TABLE 2 SUMMARY OF FUND DESIGN**

TARGET AMOUNT	JPY 3,500,000 [USD 30,435] (175 shares)
UNIT INVESTMENT AMOUNT (PAR SHARE)	JPY 22,000 [USD 191] (JPY 20,000 [USD 174] with 2,000 JPY [USD 17] in transaction fees)
FUND OPERATION PERIOD	Two years (March 2016 to February 2018)
PROJECT PLAN	First year: Current store saels (JPY 96,225,000 [USD 86,739]), new product sales (JPY 2,880,000 [USD 25,044]) Second year: Current store sales (JPY 98,991,000 [USD 860,791]), new product sales (JPY 2,966,000 [USD 25,791]) *Total sales for two years: the breakeven point at JPY 175,000,000 [USD 1,571,739] (annual average of JPY 87,500,000 [USD 760,870]
USE	New product development (product release in autumn 2016): JPY 1,600,000 [USD 13,913] material cost JPY 1,200,000 [USD 10,435] product design JPY 600,000 [USD 5,217] materials and equipment JPY 100,000 [USD 870] for contingencies
FINANCIAL RETURN	Up until the breakeven point: 2% of sales / 175 (no financial return when profit is negative) After the breakeven point: 1% of sales / 175 (no financial return when profit is negative) *105.9% according to the project plan.
SPECIAL GIFT FOR INVESTORS	New cheesecake, "neyuki", and Swiss roll, "yukimaru", per share (equivalent to JPY 5,000 [USD 44], including shipping and tax)
PRINCIPAL GUARANTEE	None
MISCELLANEOUS	A tasting eventfor investors to be held in Tokyo
RESULTS	Reached the target amount (JPY 3,500,000 [USD 30,435]) in half a day after fund release.

\*The return in which there is actual money transaction for individual investors is referred to as "financial return" and other returns are referred to as "non-financial return".

#### **⊘** Enhancement of "Empathy"

As described above, the fund was designed to bring "empathy" for the fund. MS's Micro Investment Crowdfunding is a new type of financial instrument for small businesses to promote the idea of the project/small business directly to investors and attracts financing from those who like it. Ordinary financial institutions put importance on the borrowers ability for repayment of the principal and interest of the loan. Even if it has an impressive business idea, financial institutions tell the small business to changes it for seeking more profitability in the course of negotiations.

MS introduced the design company nendo to F Corporation, and they helped to prepare the new product's concept to present to

investors, which helped to win their empathy and raise the necessary finance for new product development through the Micro Investment Crowdfunding which allows much more flexible conditions than a conventional loan.

Mr. Oki Sato who represents nendo, is a famous architect and award-wining designer, and normally his design requires JPY 10 million [USD 86,957] per project. In this case, an initial design fee was paid by the fund raised amount on the platform, and the remaining fee will be paid after three years from financing. It will be 7% of total sales and will be charged every year to F Corporation. The agreement between Mr. Sato and F corporation is an exclusive contract, whereby Mr. Sato never signs contracts with other confectionery makers.

As for the Micro Investment Crowdfunding investors, they are satisfied to be involved with promoting a new product development as well as with the financial returns. According to MS, at the tasting event for the individual investors, most of them were women around 40 years old and many of them said that they were not expecting a financial return but were rather enjoying the process of supporting a new local product.

#### 

As described above, Hokkaido is an island located in the northern Japan, where F Corporation principally produces and sells its product. They named the new product's brand as "N", from "North".

One of the N brand products, a cheese cake, represented a typical snowy landscape of Hokkaido with powdery sugar and white creamy cheese – a little forest covered with snow (sugar powder) appears when the box is opened, and each piece of cheesecake can be pulled out from below the snow. It makes a reference to the traditional method of preserving vegetables and fruit in the snow.

#### **A** Benefits for each stakeholder **Small businesses (investee)**

#### ⊘ Innovative MSME financing in local cities.

The biggest benefit is that the scheme enables fundraising by opening a new financing channel for the development of new products, which is rarely available trhough conventional loans.

#### **⊘** Leave flexibility in business management.

Other benefit is flexibility in business management, which cannot be reached from other loans of financial institutions or venture capitals. In most cases of conventional loans, they give a strict guidance to small business's management on purpose of loan – as an effective measure to hedge the default risks of borrowers. In the case of Micro Investment Crowdfunding, financing is raised from individual investors who place no limitations on the purpose of spending. As MS is given full responsibility from the investors, the MSME does not get direct intervention from investors.

#### ○ Create new leading customers (fans) outside the region.

Other benefit of Micro Investment Crowdfunding is developing new leading customers (fans). Individual investors and the small businesses not only get linked financially, but also sharing a product or its story, at the same time, investors can be the products' 'ambassadors'. In addition, if enough 'empathy' is raised by investors, the business can expect further funding from the same investors.

#### ⊘ Marketing opportunities, an advertising effect and potential for more financing.

F Corporation received some considerable media exposure according to the innovative fundraising, which led to contracts with franchise retailers such as a major convenience store chain, Seven-Eleven and a department store chain, Seibu. The new business relations may open up negotiations for new loans with the local financial institutions as they positively evaluate F Corporation's business growth.

#### **⊘** Collaboration with external professionals.

Through the Micro Investment Crowdfunding scheme, F Corporation was able to engage external professionals who would be extremely difficult to contact otherwise. Partnership opportunities are limited when the business has limited outreach and networks. However, in this case, MS was able to introduce a world famous designer to the local small business, that addedvalue through design and dramatically enhanced the marketing of the new product.

#### **Municipal government**

#### ⊘ Advertising K City.

The Micro Investment Crowdfunding project in K City often appeared in the newspapers, magazines, and on TV. It contributed not only to F corporation, but to raising awareness of K City's dairy products in general.

## ✓ Acquisition of customers outside K City ("earning from outside").

As described above, one of the targets of K City municipal government is to earn money by attracting consumers and investors from outside the city. It materialized in the F corporation's case as it created consumers, investors, and even fans from across Japan.

#### **⊘** Efficient use of subsidy.

In the case of K City Support fund, a total amount of JPY 11.9 million [USD 103,480] was raised in FY2015, while the municipal government subsidized JPY 1.6 million [USD 13,913] (JPY 800,000 [USD 6,957] x 2 funds) of it. This shows that the public subsidy successfully leveraged roughly eight times more investment on the platform. For example, subsidy for the "New industry creation project" covers up to two-thirds of MSME's total project cost (up to JPY 10 million [USD 86K] for a feasibility research to the new industry creation and up to JPY 30 million [USD 260,870] for another collaborative research to develop new technologies and fields. It is relatively effective spending, compared to the other subsidies of Kushiro municipal government.

#### **⊘** Creating a pilot project for Micro Investment Crowdfunding.

F Corporation's success story may stimulate other small businesses in K City to try fundraising with K City Support fund. Micro Investment Crowdfunding has gained trust from the local MSMEs who may apply for funding in the future, which in turn will further contribute to the revitalization of the local economy.

#### **Financial institutions**

#### ⊘ Avoiding high-risk financing, but getting opportunity to offer low-risk financing.

If a fund is raised on Micro investment Crowdfunding, there is no need for financial institutions to offer a new development cost which is a high-risk loans, but they can extend new low-risk loans to replenish the working capital once the borrower has achieved a certain business target with the money after fundraising. In the case of F Corporation, their repayment ability increased through the fundraising process of Micro Investment Crowdfunding, for example, their business plan became more stable and obtained the large-scale sales channels. Micro Investment Crowdfunding offered such non-financial services which strengthened the borrower's business management.

#### **Individual investors**

## Satisfaction from promoting K City and supporting local small businesses.

Individual investors put importance on social significance other than the financial return when they decide to finance a project through Micro Investment Crowdfunding. As a fan that empathized with the project, investors feel that they have supported K City and its good prospects through fund-raising act itself and non-financial returns, such as gifts and products, and earn social satisfaction through this process.

#### **⊘** Financial return with less risk of principal impairment.

The benchmark of financial return is not linked to the sales of a particular product, but to the total sales of the small business. Although the use of this financing is the development of a specific product, there are risks and a possibility that it may not be linked to good sales. By setting the total sales of F Corporation as a benchmark, which is generating a stable income with a lengthy

track record, the risk of delays, non-repayment, or principal impairment are reduced and it leads the financial returns to more certainty.

In addition, by setting the fund management period to two years, it avoids the influence of the total sales' volatility. The minimum investment amount is JPY 22,000 [USD 191] per share, which is relatively cheap, and makes individual investors to invest easily.

### 1.3 Observations on Micro Investment Crowdfunding

The future challenges of Micro Investment Crowdfunding are discussed from the perspective of each stakeholder.

#### **1** Small business

#### ✓ Combination of financial and non-financial returns based on behavioral characteristics of individual investors.

As behavioral characteristics of individual investors, not only financial return but also a feeling of satisfaction from being part of socio-economic change are involved in their decision making. Therefore, the balance of both factors of the product or the small business are important for the fund to be attractive to investors. Especially one of the factors that increase social satisfaction is nonfinancial returns that include gifts/special events for investors which small businesses arrange in their fund design. Costs for nonfinancial returns can be managed by the small business, and let the small businesses with limited financial returns to design the best balance of financial returns and non-financial returns.

In addition, as the financial return is linked to the total sales of the company and the fund management period is set to two years, the risk of principal impairment is reduced. As the small business bears a certain level of burden and cost, the fund becomes very attractive in response.

F Corporation produces and sells confectionery which is popular particularly among women, many of which were housewives. Some of them said that they value the social significance more than the financial return. In this fund contract, the small business offers cakes that are equivalent to JPY 5,000 [USD 44] per share as a gift (non-financial return) in addition to the financial return, so the fund is satisfactory from the viewpoint of providing non-financial returns. Many individual investors judged that it has financially and socially favorable investment condition compared to the other fund, however, for the small business, there are a certain burden on both the financial return and gifts, and considering the characteristics of individual investors, even though the financial return was less to reduce management expenditure, the possibility of achieving the funding objective might be high.

In the midst of expansion of the number of individual investors for Crowdfunding in Japan, even though the characteristics of individual investors are still biased, it is important to examine the preferences of financial return and/or personal satisfaction of targeted individual investors in advance, and design more optimal return conditions for both investors and small businesses.

#### 2 Municipal government

#### ⊘ Raise awareness of the Micro Investment Crowdfunding mechanism among the local small businesses.

Another success factor is that the local government actively promoted the Micro Investment Crowdfunding platform, which local small businesses were not familiar with. Micro Investment Crowdfunding mechanism requires a certain financial knowledge and it is important for local governments to fill this information gap to promote the best use of Micro Investment Crowdfunding. From the Micro Investment Crowdfunding platform's point of view also, the local government is often a key partner to access funding opportunities among the local small businesses.

## Chapter 2: A case study of Super-long-term project supported by Micro Investment Crowdfunding (N village)

N village in Okayama Prefecture launched a "100-Year Forests Initiative" in 2008 aiming to revive the forestry as a key industry of the village. However, it was very difficult for the financial institutions to finance this project, given the project implementation period was up to 50 years. As a solution, the project counted on fundraising through Micro Investment Crowdfunding.

## **2.1 Overview of N Village**

N village is a small village with a population of approx. 1,500, located at the northeastern end of Okayama Prefecture.

95% of the village is forested and 85% of the forest area is plantations of cedar or cypress.

#### FIGURE 4 OVERVIEW OF N VILLAGE

- ⊘ Population: 1,495 (As of Sep. 1,2016)
- O Number of households: 596
- Area: 57.97 km2 (95% forested)
- O Annual rainfall: approx. 2,000mm
- ⊘ Major industries: Forestry, Agriculture, Tourism
- Budget of the village: approx. 1.95 billion yen [0.02 billion USD] (2016)



(Source: N Village statistics)



(Source: National census (Statistics Bureau))

Thanks to the forestry industry, the Village had flourished during post-WWII Japan. However, as in many rural areas of Japan, the population gradually started declining from the 1970s mainly due to the outflow of young people seeking for both academic and employment opportunities in the metropolitan areas. The population of the village once exceeded 2,000 in the end of 1970s, and currently it is about 1,500. According to the population forecast by the Ministry of Health, Labor and Welfare, this figure is envisioned to drop to 1,000 by 2040, with an elderly rate of 65%.

In response to a residents' poll in 2004, N Village announced its decision to leave the Absorption Conference<sup>3</sup> where six municipalities were discussing a potential merger into a single municipality, "M City". The merger of municipalities was ongoing under a national policy of the time, given the outstanding trend of shrinking and aging local population. However, N Village ventured to withdraw itself from the planned merger and decided to remain as it was. Since the decision not to merge, the villagers started striving to shape the direction of their village in all seriousness and have it remained "independent" in a sustainable manner.

### **2.2 Overview of "100-Year Forests Initiative"**

#### Background

After WWII, the Government of Japan actively took a lead to plant coniferous trees, including cypress and pursued an "afforestation policy" to meet increasing demand for wood in the country's reconstruction. Specifically, there was a strong demand for fast-growing cypress trees, which are easily used for construction materials. In this regard, cypress trees were planted in N Village in the 1950s and 60s.

Around 1965, N village started selling off municipal forests to the local residents. Consequently, the mountains ended up in the hands of multiple owners, with the land segmented. The wood self-sufficiency rate of Japan has consistently declined after liberalizing timber imports in 1960; from 86.7% in 1960 to 19.2% in 1999. The Japanese forest industry has been hard hit by cheap wood imported from abroad, and the forestry industry of N village also shrank drastically.

<sup>&</sup>lt;sup>3</sup>The members were N village, H village, M town in A county and O, S, A and K towns of K county. M City was newly formed in March 2005, with the merger of towns and villages except for N village.



#### FIGURE 5 TIMBER SUPPLY AND SELF-SUFFICIENCY RATE

Cypress trees planted in the village in the 1950s and 60s were ready for logging after more than half a century. However, the forests had not been properly maintained and the timber resources were damaged to some extent, so the village Mayor took a strong initiative, to revive.

In 2007, the N Village Office (hereinafter called "Village Office") established the "Employment Strategy Council" that was assisted by subsidies from the Ministry of Health, Labor and Welfare. In the following year, the "100-Year Forests Initiative" was announced at the council and the village started to campaign for people to move to N Village from the metropolitan areas and other cities. Subsequently, the "100-Year Forests Initiative" was actually launched when a "Memorandum of Understanding on forest management and operation in N village" (hereinafter "MOU") was signed by the three parties in 2009;N village, the M City-east Forestry Cooperative (hereinafter called "Forestry Cooperative") and T-corporation Inc., a private forestry developer.<sup>4</sup> The main points specified in the MOU are as follows:

<sup>(</sup>Source: Japan Tropical Forest Action Network)

<sup>&</sup>lt;sup>4</sup> t-corporation Inc. is a private company, which provides various services such as forest operation management, marketing and finance to public and private sector clients.

1 N village receives administrative right of the segmented forest land owned by multiple residents and entrusts the forest operation and the sales management to T-corporation Inc.

2 T-corporation Inc. obtains necessary finance for the forest operation and sales management on fund collected via Micro Investment Crowdfunding., specifically for acquiring such items as high-spec forestry machines etc.

The distribution agreement between N village and T-corporation Inc. stipulates the following:

- ⊘ T-corporation Inc. provides business support for Forestry Cooperatives, to make the effective forest operation and maintenance.
- ⊘ T-corporation Inc. leases high-spec forestry machines etc. to Forestry Cooperatives.
- ⊘ The Forestry Cooperative offers business to support T-corporation Inc. to make the sales management more effective.

#### **Description of the project**

The "100-Year Forests Initiative" in N village is featured by the "Consolidation" of forests, "Rationalization" of the forest operation and the "High-value-adding" of marketing and processing. Above all, the driver of this project is stakeholders' motivation to realize co-existence and co-prosperity with this sustainable value chain, which forms a pleasant eco-system for the local residents as well.

The main competitive disadvantage of the Japanese forest industry is the lack of value chain; forest operation  $\rightarrow$  transportation  $\rightarrow$  wood processing  $\rightarrow$  sales, which is essential to have the whole forest industry highly value-added.

## To rebuild a sustainable value chain of forestry in N village, the following issues need to be addressed:

- Low profitability caused by the excessive fragmentation of ownership (lack of economies of scale)
- High dependence on conventional inefficient forestry machines in the

forest operation and maintenance.

• Lack of negotiation capability in the production side, the transaction costs were low and was not be differentiated.

These issues are currently being solved with the cooperation between the following three parties: the Village Office, Forestry Cooperative and N School of Forest Co., Ltd.<sup>5</sup> (hereinafter called "School of Forest" - firstly participated as T-corporation Inc."). They cooperate one another to create new style forestry with high added value.



#### FIGURE 6 VALUE CHAIN OF THE 100-YEAR FORESTS INITIATIVE

#### (Created by author)

The Village Office is trying to acknowledge the vision "100-Year Forests Initiative" amongst all the forest owners and persuading to conclude a long-term (10-year) stewardship consignment contract with each one by one, to ensure their forest to be consolidated. The Forestry Cooperative oversees the operation and maintenance of forest including the construction of strip roads by using high-spec forestry equipment leased by T-corporation Inc. Instead of the timber to be sold in the raw wood market, the School of Forest oversees marketing on a new sales channel for the timber and developing new products while supporting the forest operation.

<sup>&</sup>lt;sup>5</sup> A company independent from t-corporation Inc. in the purpose of specific project which is after-mentioned.



Each stakeholder respectively tries to make as much profit as possible. Since the "100-Year Forests Initiative" was launched, they encountered many difficulties in improving an eco-system to a solid, newly created value chain. For example, many land owners doubted and had uncooperative attitudes toward this project shortly after the inauguration. Quite a few people showed antipathy toward T-corporation Inc., too. The Village Office staff members contacted every single land owner, provided detailed explanations, and won their consent step by step. Since the inauguration of this project seven years ago, the three parties have continuously held a monthly discussion to jointly tackle various issues.

#### **Business model**

The thinned timber logged in the contracted forest area of the N village is once transported to the timber yard of the Forestry Cooperative, then processed and sorted into grades "A", "B" or "C" by the quality and shape of the wood before they are finally sold to either house-builders or construction material manufacturers through sales channels of the School of Forest.

They also buy some timber so that craftsmen can make the wooden furniture for direct marketing. 50% of the sales proceed from the timber is pooled in a special account on the Village Office to manage the "100-Year Forests Initiative", while the remaining 50% is paid out to the land owners. The forest operation cost consignment toward the Forestry Cooperative is paid from pooled fund in the special account, adding some national subsidies and/or the general account of the Village Office.

Below is a diagram of the business model of the "100-Year Forests Initiative.



#### FIGURE 7 BUSINESS MODEL OF THE "100-YEAR FORESTS INITIATIVE"

### **2.3 Fundraising Summary**

Thanks to the "100-Year Forests Initiative", N village has created a sustainable eco-system where stakeholders can enjoy a win-win relationship. The Micro Investment Crowdfunding of MS played an important role in realizing this eco-system.

T-corporation Inc. launched fund appeals twice through the Micro Investment Crowdfunding platform of MS to raise approx. 50 million JPY (0.43 million USD).

The fund was then allocated to purchase high-spec forestry equipment for more efficient forest operation and maintenance.

The basic information of T-corporation Inc. is stated below:

COMPANY NAME	T-corporation lnc. (Parent company of N village/School of Forest Co., Ltd.)
FOUNDED	February 2, 2009
BUSINESS LINEUP	Forest operation management Production, processing and sales of forest assets (wood) Regional branding, marketing, finance Planning and operation of human resource development
BUSINESS SCALE	Revenue for Fiscal 201532,000,000 JPY (278,261 USD) Capital 77,700,000 JPY (675,652 USD) Number of employees Approx. 5

#### **TABLE 3** BASIC INFORMATION OF T-CORPORATION INC.

T-corporation Inc. was established as a consulting firm for forestry in 2009. Originally T-corporation Inc. was a subsidiary of A-corporation Co., Ltd., which is also a consulting firm, providing environmental solutions and effective use of unutilized resources. 20% of T-corporation's shares are owned by more than 10 individuals and the remaining are owned by the management of T-corporation Inc. along with the progress of its business. T-corporation Inc.'s the sales amount as of FY2015 was mostly from advisory fees. When T-corporation Inc. develops a new forestry-related business, a new vehicle called the "fund", which is independent from T-corporation Inc. is established. T-corporation Inc.'s management system is similar to the one of non-profit organizations. Therefore, it is considered that there is no large fixed asset in the balance sheet of T-corporation Inc. and the personnel expenses mainly account its operating expenses. Moreover, borrowings are made through established fund on Micro Investment Crowdfunding for new projects, so T-corporation Inc.'s borrowing is limited.

T-corporation Inc. considers unused forest resources as local assets, and they take necessary measures to improve efficiency and profitability for the commercialization of the forestry industry. Equipment used in the project and rental fee expenses are covered by the stable sales revenue of timber and timber processed goods, therefore creditworthiness of T-corporation Inc. does not have any influence on fundraising.

#### **Financial Structure**

T-corporation Inc. purchases high-spec forestry equipment with Micro Investment Crowdfunding fund and concludes a contract with the Forestry Cooperative to lease the equipment. In addition, T-corporation Inc. receives a rental fee from the Forest Cooperative and sales support fee from the Village Office, and pays an annual financial return (refer to the "Summary of fund" below) that is calculated based on the preset formula in the anonymous partnership contract of the Micro Investment Crowdfunding.

Main purpose of the fund was to purchase the machinery for forestry and leasing it to the Forest cooperatives. Forestry is the core industry of the village with established sales channels that has kept the business sustainable. Therefore, as long as the forestry continues, income from leased machinery also continuously will be yielded and a stable source of financial returns will be kept. In addition, T-corporation Inc. is tackling to widen sales channels for more profitable business operations. The village intensively works in this project in order to lead the maximum and effective use of the forest resource, as well as to secure the expected profitability of the fund.



#### FIGURE 8 FINANCIAL STRUCTURE OF 100-YEAR FORESTS INITIATIVE

(Created by author)

A summary of the fund is as shown below:

#### TABLE 4 SUMMARY OF N VILLAGE COMMON FOREST FUND

FUND NAME	N Village Common Forest Fund (2009/2010)
MAXIMUM AMOUNT OF STAKES COLLECTED	49,400,000 JPY (998 units) (0.43 million USD) First term : 25,200,000 JPY (504 units)(0.22 million USD) Second term: 24,200,000 JPY (484 units)(0.21 million USD)
MINIMUM CONTRIBUTION (PER UNIT)	51,000 JPY (443 USD) (Capital contribution: 50,000 JPY (435USD) / Handling fee: 1,000JPY(8.70USD))
PERIOD OF FUND OPERATION	First term: July 1, 2009 - June 30, 2019 Second term: January 1, 2011 - June 30, 2019
OPERATION PLAN	First term: Revenue from forestry machines lease for 10 years: 90 million JPY (0.78 million USD) Revenue from sales support for 10 years: gross timber sales 10% + financial return from the pooling fund* Second term: Revenue from rental forestry machines for 8 years and 6 months: 53.062 million JPY (0.46 million USD) Revenue from sales support for 8 years and 6 months: gross timber sales 10% + financial return from the pooling fund* * If there is a surplus of the pooling fund controlled by the Village Office, after all the necessary expenses have been paid, the surplus will be shared by all landowners and T-corporation Inc.
FUND APPLICATION (INVESTMENT TARGET)	<ul> <li>Purchases of high-spec forestry equipment.</li> <li>Forest Stewardship Council (FSC) Certification: proof of sustainable forest management. It could also upgrade the quality and added value of the wood.</li> <li>* Costs of acquiring certificate etc.</li> </ul>
FINANCIAL RETURNS	First period [Before the break-even point] * Revenue from rental forestry machines × 80% + Revenue from sales support × 50% [After the break-even point] * Revenue from rental forestry machines × 80% + Revenue from sales support × 23% * Break-even point Revenue from rental forestry machines 90 million JPY, Revenue from sales support 60 million JPY (0.52 million USD) Second period [Before the break-even point] * Revenue from rental forestry machines × 80% + Revenue from sales support × 50% [After the break-even point] * Revenue from rental forestry machines × 80% + Revenue from sales support × 23% * Break-even point] * Revenue from rental forestry machines × 80% + Revenue from sales support × 23%
SPECIAL BENEFIT FOR INVESTORS	<ul> <li>A plate with the stakeholders list to be placed in the facility of the School of Forest, Nvillage</li> <li>Free stay at the house of wood (show house) in Nvillage,Free tickets for hot spring bathing</li> <li>Discounts upon using the facilities of the N forest village promotion agency</li> </ul>
PRINCIPAL GUARANTEE	No

#### **Benefits to stakeholders**

The stakeholders can gain the following benefit under this project:

#### 1 N Village Office

 $\odot$  Increasing the forest value as public assets.

Forests are effectively managed with the latest machinery to produce a better quality of timber and considered as village's valuable public assets to sustain its production basis but also function as disaster prevention.

⊘ Community revitalization / Job creation.

In 2004, N village chose to remain as an independent village and was not merged with other villages. Under the view of the "100-Year Forests Initiative" in 2008, many new ideas for the forests and forestry have been incubated and implemented one after another. Sales of forestry and related activities amounting 100 million JPY (0.90 million USD), and reached 800 million JPY (6.96 million USD) under sales expansion based on diversification of products that broaden a sales channel.

This means more job opportunities and the resulting success in terms of revitalizing the community economy and creating jobs. In fact, the village has already created 130 new jobs to date (2016). Although the village is now prospering with this project, the ongoing dwindling and aging population is still obvious issue to be addressed, thus it is an extremely worthwhile scheme for N village.

#### **2** Forest Owners (Local residents)

#### ⊘ Boost properties' (forests) economic value.

Some forest owners have simply received the land by inheritance, whereas the others have already moved out from the village. As each land plot that they own is segmented, many owners found difficulties of maintenance and effective use, and also wished to enhance its economic value. The "100-Year Forests Initiative" supported to exploit those idle assets by adding a value, created a properly managed forest that produces high quality timber.

#### ⊘ Rebuild a relationship within the village.

Many of villages in local areas suffering from depopulation and aging also suffer from tenuous relationships amongst local

residents. The "100-Year Forests Initiative" rebuilt a relationship amongst local residents, by bundling people's heart aside from the economic linkage and cultivated affection for their village.

#### **3** Forest cooperative

#### $\odot$ Revive pride in the forest industry.

The number of forest industry workers is declining nationwide. One of the reasons is linked to the image of "muddy, heavy and dangerous" works. In N village, however, a positive vision of the "100-Year Forests Initiative" removed that established image and people happened to re-evaluate forestry work. The Forestry Cooperative succeeded at raising the status of forest industry workers by showcasing the "100-Year Forests Initiative" for many people who visit the village to study. It has also motivated staff members in the Forestry Cooperative and they revive "pride" in their work, having a major part to play in an important project for their village.

## $\odot$ Increase in job opportunity by accelerating an effective forest operation and maintenance.

Consolidation of the segmented forest lands boosted the implementation of the optimized operation for the Forestry Cooperative and increased a capability of skilled forestry workers. Thus, the Forestry Cooperative accomplished to implement more active and rationalized forest operation. In 2016, 26 staff members are working at the Northern branch of the Forestry Cooperative in the village, 20 of whom in the forests (6 in the office). This number of personnel is relatively high compared to the neighboring Forestry Cooperatives.

#### 4 School of Forest (T-corporation Inc.)

#### $\odot$ Acquiring empathy for the project.

The "Common Forest Fund" was the first project to support forests/forestry with Micro Investment Crowdfunding scheme in Japan which T-corporation Inc., succeeded. T-corporation Inc. was established in February 2009 by its parent company, A-corporation Co., Ltd.., shortly before the "Common Forest Fund" was created. In general, a newly founded small business, such as T-corporation Inc. at that time, confronts a difficulty in obtaining

significant amount money from either the financial market or financial institutions due to a lack of insufficient credit history, unless they have a guarantee supplied by a third party with sufficient financial capacity.

The concept of the "100-Year Forests Initiative" became well-known among numerous investors, and even without guarantee, Tcorporation Inc. successfully raised the fund in purchasing the equipment through Micro Investment Crowdfunding.

#### ⊘ Added the market value of wooden products "made in N village"

Investors of the "100-Year Forests Initiative" had an emotional attachment to wooden handicrafts produced in N village. These art crafts marked completely different value from the other commercialized wooden handicrafts. This market value enhances the marketability of those products made in N village.

#### $\odot$ Securing new human resources.

It is further expected that the School of Forest promotes an inflow of young generations and highly-motivated personnel by offering a work in the design and production field that can add value for the market of N village.

### **2.4 Observations on Micro Investment Crowdfunding**

The "100-Year Forests Initiative" was launched in 2008 and has been successful to date (2016), thanks to the N Village "Common Forest Fund".

The following were key findings for the successful fundraising:

#### Investors' "empathy" to the "100-Year Forests Initiative"

Innumerable local villages in Japan, like N village, suffer from depopulation and aging society, but it must be difficult for such villages to organize and implement a large-scale and comprehensive countermeasure like the "100-Year Forests Initiative". The investors of "Common Forest Fund" feel strong empathy to the concept of "100-Year Forests Initiative", in the sense that the challenge to revive the community by commercializing the forest resources as well as effectively maintaining and protecting them. It was reported<sup>6</sup> that 76% of the investors who invested in the fund are male and 71% of the total investors live in urban areas

<sup>&</sup>lt;sup>6</sup> "Furusato toshi no Subete" Akai, Komatsu, matsuo, (2013)

like Tokyo and Osaka. Those investors visit N village to see how the invested money is utilized. It seems like a large majority of investors did not expect high financial return, but they give importance to be involved and deal with environmental issues through their investment in the project. Their empathy should be highlighted in this specific case, as these investors take high priority in the level of empathy that they feel when selecting their investment on the Micro Investment Crowdfunding platform. In this particular case, increase in the awareness of environmental issues that was triggered by the Kyoto protocol (1997), highly relates to the investor's interests.

As the N village decided to leave the Absorption Conference and stay independent, a sense of crisis might have positively cohered the whole policy and philosophy of local residents. They realized that they urgently needed a sustainable economic development plan to stay independent, and this urged them to focus on an asset, the forest industry. This clear story made an appeal to the individual investors who have a high environmental awareness and through investing in the fund, they share the feeling of keeping the forest together for the next 50 years.

#### **Well-designed Project**

N- village, together with T-corporation Inc., spent considerable time preparing and addressing some predicted issues for the "100-Year Forests Initiative" as well as for the "Common Forest Fund". The project was the first trial of funding for forestry through Micro Investment Crowdfunding and to have a sustainable value chain was the first requisite for success, and to guarantee sufficient profitability. As a result, the two funds were successfully raised in the expected period.

The key findings of this case are as follows:

## $\odot$ Concept of the optimizing forest management as a valuable resource of the village fits with the times.

N village chose to develop forestry as its main industry to sustain its society. The forest, trees planted in the 1950s and 60s is the only resource that the village is capable to add value in terms of successful revitalization of local economy. The concept had enough potential to grab the attention of people who have a high environmental awareness, consequently, generated and cultivated their empathy to invest.

#### ⊘ Cooperation to create a sustainable value chain as a whole.

The strong initiative by the village office especially that of the Mayer, and the well-designed project led three stakeholders to effectively cooperate to build a sustainable value chain rather than seeking for each ones benefit but for empathy for the initiative.

## ⊘ Compatibility between Micro Investment Crowdfunding and a long-term project.

"100-Year Forests Initiative" is a long-term project that continues for more than 50 years. Micro Investment Crowdfunding enables the project to be economically sustainable by providing a longterm finance for T-corporation Inc., to acquire the important equipment that sustains forest maintenance, which is the main activity for this project.

Despite T-corporation Inc. being a small consulting firm, it planned to raise 49,400,000 JPY (0.43 million USD) on Micro Investment Crowdfunding platform to purchase high-spec forestry machines. In general, financial institutions do not provide a large amount of loan for a small-scaled company like T-corporation Inc., with a debt to sales ratio of more than 1.5<sup>7</sup>.

As T-corporation Inc. needed to raise the fund in the same year of their establishment in 2009, there were no track record in banks and was not able to obtain a loan. Moreover, in spite that they had a guarantee supplied by the third party, A-corporation, their parent company with enough financial capacity, it was also insufficient.

However, by fulfilling "empathy" of investors through the concept of "100-Year Forests Initiative", T-corporation Inc. successfully raised the targeted amount for 10 years funds. In addition to empathy, a high possibility of sustainable business plan that may guarantee sufficient cash for constant distribution of the financial return on the fund maturity, which is based on the value chain created by the "100-Year Forests Initiative" was also highly evaluated by the investors.

 $<sup>^{7}</sup>$  In general, it is preferable that the debt to sales ratio is less than 30%.

## Chapter 3: A case study of Micro Investment Crowdfunding for the reconstruction of MSMEs' business after the earthquake.

This is the case of a traditional Japanese style hotel in A City, which is raising a fund through a Micro Investment Crowdfunding platform (as of Dec 2016). It aims at reconstruction from the serious damage caused by the critical earthquake which hit Kumamoto Prefecture in April 2016. A distinctive feature of this particular Micro Investment Crowdfunding mechanism is its unit composition of each fund: "half investment and half donation"\*. [\*See 3-3)]

## **3.1 Overview of Kumamoto Prefecture**<sup>8</sup>

Kumamoto Prefecture is located in central Kyushu Island, neighboring Fukuoka, Ohita, Miyazaki and Kagoshima Prefectures. Kumamoto Prefecture's western coastline faces Ariake Sea.

Kumamoto Prefecture has a population of approximately 1.8 million, however, trends of both Population and Employed Population have been gradually decreasing during the last 10 years.

#### FIGURE 9 OVERVIEW OF KUMAMOTO PREFECTURE



(Source: National Census 2010)

<sup>&</sup>lt;sup>8</sup> Kumamoto Prefecture Web site (http://www.pref.kumamoto.jp/Default.aspx)
## COMPOSITION OF SECTOR IN KUMAMOTO PREFECTURE



Gross prefectural product (GPP) of USD Kumamoto Prefecture is 52.205 million, ranked 25th among 47 prefectures in Japan. The tertiary sector accounts for 72% of the GPP. Main industries in tertiary sector are amusement service industry, food and drink service industry, etc. The secondary sector accounts for 25% and it is comprised of semiconductor manufacturing, transportation equipment manufacturing, food processing and so on. Gross Product in Kumamoto Prefecture in each sector is relatively stable. Considering various factors, the economy in Kumamoto basically was kept in good condition between 2009 and 2013, but turned into a steep recession when the huge earthquake struck Kumamoto Prefecture and damaged social overhead capitals in 2016.

## **3.2** The 2016 Kumamoto earthquake<sup>9</sup>

On the 14th of April 2016, an earthquake with a magnitude of 6.5 centered in the Kumamoto region occurred and was immediately followed by an aftershock with a magnitude of 7.3, which caused further damage in the Kumamoto and other regions. In addition to the series of the earthquakes, a heavy rain caused a massive landslide in the region. As of December 8th, 2016, 151 people have passed away and 2,337 people have been injured.

In the affected areas, life-line infrastructure, production facilities and equipment that sustained the local economy and life of the local people were extensively damaged. Estimated amount of damage to the social overhead capitals (buildings, roads, supply of electricity, water and gas) in Kumamoto and Ohita Prefecture is around JPY 40,000 million (approximately USD 21,739).

<sup>&</sup>lt;sup>9</sup> Trial Calculation of influence on Kumamoto Earthquake in 2016, Cabinet Office http://www5.cao.go.jp/keizai3/kumamotoshisan/index.html

**TABLE 5** ESTIMATED AMOUNT OF DAMAGES TO SOCIAL OVERHEAD CAPITALS IN KUMAMOTOAND OHITA PREFECTURE

ІТЕМ	ESTIMATE OF DAMAGE (MILLION USD)
Buildings (house, office building, factory and etc.)	13,913 ~ 26,957
Social infrastructure (roads, ports, airports and etc.)	3,478 ~ 6,087
Electricity, water, and gas supply	870
Other social overhead capital	3,478 ~ 6,087
TOTAL AMOUNT	21,739 ~ 40,000

(Source: Estimation of impact from Kumamoto Earthquake in 2016, Cabinet Office)

#### TABLE 6 IMPACT OF KUMAMOTO EARTHQUAKE ON THE KYUSHU ECONOMY (UP TO FY2016)

CONTENTS	ESTIMATE OF DAMAGE (MILLION USD)
Stagnation of producing activity due to the damage of infrastructure.	200 ~ 557
Stagnation of producing activity due to the damage of supply chain.	104 ~ 340
Decrease of consumption due to a downturn in consumer sentiment.	1,652 ~ 2,000
Downturn of touristic consumption due to the decline of tourists from out of Kyushu.	313
TOTAL AMOUNT	2,270 ~ 3,209

(Source: Trial Calculation of impact on Kumamoto Earthquake in 2016, Cabinet Office)

## **3.3** Overview of "Kumamoto Earthquake Support Fund"

#### **1** Background: Furusato Investment

In 2014, the Government of Japan launched Furusato investment ("investment in hometown"), a new initiative for stimulating and revitalizing local economies. The Japanese cabinet office organized a liaison conference involving the local governments, financial institutions, crowdfunding platform operators, relevant associations, advisors, and other relevant ministries and agencies to discuss how to promote Furusato investment by making the best use of crowdfunding.

Following the strong initiative taken by the Government of Japan, the Kumamoto Prefectural Government established a conference to promote Furusato investment in Kumamoto, with a focus on following activities; (i) providing and sharing information through the regional network, (ii) Raising awareness of Micro Investment Crowdfunding scheme, and (iii) other necessary activities to achieve its purpose. MS was involved in this conference to promote a wide use of Micro Investment Crowdfunding. It is thanks to this conference effort that some MSMEs successfully raised the fund via the Furusato investment scheme, and the conference is continuously trying to disseminate this financial assistance scheme for the local economy development. It was actually shortly after the establishment of the conference that the earthquake happened.

#### **2** Background: Financial Needs for Reconstruction

Right after the 2016 Kumamoto earthquake hit, the central and local governments, some governmental policy-based financial institutions (e.g. Development Bank of Japan (DBJ), Regional Economy Vitalization Corporation of Japan (REVIC)) and local financial institutions started to support the rehabilitation in Kumamoto, utilizing the experiences and lessons learned from the Great East Japan earthquake in 2011. As a result, the rehabilitation made significant progress.

On the other hand, the economy in the Kumamoto region has not been fully recovered to the level prior to the earthquake because of certain stagnation in the manufacturing sector and downturn in the tourism sector, etc. One of the bottlenecks in the reconstruction of its local economic activity is the constrains of the public financial support; public financial support is limited to pure rehabilitation and/or reconstruction and not for the concept of "build back better".

# **3** Cooperation with relevant stakeholders -Lessons learnt from the Great East Japan Earthquake .

During the aftermath of Great East Japan Earthquake which struck the northeast region of Japan in 2011, the Government of Japan had to address the rehabilitation of affected areas as well as the accident in Fukushima nuclear power plant. A complex and unprecedented crisis prevented from a smooth governmental support operation, and there was unfortunately a critical delay in public financial assistance to MSMEs.

Meanwhile, crowdfunding by individuals came in to fill this gap in financing. MS played an important role as one of the major crowdfunding platform operators that channeled MSME financing, and started a unique

Micro Investment Crowdfunding consisting of half investment and half donation. Based on this working experience in the Great East Japan

Earthquake, MS found that it is very important and necessary to implement fundraising in coordination with local stakeholders like local government even in the chaotic situation shortly after the earthquake, which can also reduce MS's burden in the implementation. Given this prior experience, MS agreed to the idea of Kumamoto prefectural government to utilize Micro Investment Crowdfunding for the rehabilitation and reconstruction of local MSMEs in Kumamoto Prefecture.

Consequently, the prefectural government, Kumamoto University, and Chamber of Commerce and Industry of Kumamoto (herein after "CCI Kumamoto") joined to collaborate for the Kumamoto Earthquake Support Fund, one of Micro Investment Crowdfunding projects to be funded by MS via Securite—MS's online platform— for the local enterprises seeking fundraising.

A basic role of the prefectural government of Kumamoto is not only introducing Securite to local MSMEs, but also subsidizing a part of initial and administrative costs that Securite's fund recipients (local MSMEs) need to pay to MS.

Compared to the collaborative framework that MS had already established with other municipalities so far, the involvement of the academic institution, Kumamoto University in this case, is considered different from others as one of its unique characteristics. Kumamoto University is expected to promoting the understanding and use of Micro Investment Crowdfunding as well as stimulating and cultivating entrepreneurship of students in relation with local innovative MSMEs. Kumamoto University can be an important stakeholder adding value in this sense. Future entrepreneurs of MSMEs planning to raise funds for their start-up, on a Micro Investment Crowdfunding may be identified through joint working with Kumamoto University.

The CCI Kumamoto also plays a role to introduce MS to the local MSMEs. As CCI has a strong connection with local communities and is responsible for supporting local enterprises in a hands-on style, CCI Kumamoto is also capable to find hidden financial needs of local potential MSMEs.

Since the local financial institutions in Kumamoto had established their own investment fund for reconstruction as well, they do not need to participate in this scheme, for instance, The Higo Bank, Ltd. established Kumamoto Disaster Reconstruction Fund in cooperation with the other regional banks. Local financial market is well-developed in Kumamoto Prefecture; dominated by the several core regional banks such as the Higo Bank, Ltd. and the Kumamoto Bank, Ltd., those banks could efficiently identify financial needs of local MSMEs. It did not take so long to establish their own funds for recovery right after the earthquake.

# 4 Structure of the "Kumamoto Earthquake Support Fund" ("half investment and half donation").

A basic structure of a fund is the same as other MS's Micro Investment Crowdfunding. However, the most unique feature of this case is the mixed form of money between donation and investment. This financial structure is the same as the Great East Japan Earthquake Fund created by MS in 2011. Needless to say, the biggest advantage for the MSMEs in this scheme is the smaller financial burden which is made possible by the mix with donations.

## FIGURE 10 <NUMERICAL EXAMPLE> CASH FLOW OF "A HALF INVESTMENT AND A HALF DONATION FUND"



# Solution 3.4 "Star-Studded Sky" Roof Top Bar Fund by S hotel, a traditional Japanese style hotel in A City, Kumamoto Prefecture.

#### **1** Summary of A City <sup>1011</sup>

'A' City is located in the northeast of Kumamoto Prefecture, with one of the world's largest caldera, a single volcano with five peaks. It is relatively cool throughout a year with a pluvial climate, an annual average temperature of  $13^{\circ}$ C and average rainfall is about 3,000mm. The city has a

<sup>&</sup>lt;sup>10</sup> A City website (http://www.city.aso.kumamoto.jp/municipal/profile/outline/)

<sup>&</sup>lt;sup>11</sup> A City Statistics (http://www.city.aso.kumamoto.jp/files/uploads/2014/02/toukei\_h28.pdf)

population of 27,018 people in 2015, but the total and industrial population is slightly declining year by year.





(Source: A City Statistics)

The gross municipal product (GMP) of A City is USD 935 million and the secondary sector, whose main industries are rubber products, electrical equipment, and chemical products, accounts for 37% of GMP, the tertiary sector with tourism of A caldera area accounts for 56%.





<sup>(</sup>Source: A City Statistics)

Gross municipal product during the last 5 years since 2009 is on an increasing trend thanks to the rise of the secondary sector, however, the tertiary sector stagnates due to a decline in tourism caused by the heavy rain in 2014. Many

tourists considered that the affected area was still under recovery from the damage and tended to cancel their visit.

#### FIGURE 13 ECONOMY OF A CITY



#### **GROSS MUNICIPAL PRODUCT BY SECTOR IN A CITY**





#### (Source: A City Statistics)

#### **2** Impacts from the Earthquake on A City

Regarding the damages caused by the earthquake, particularly in A City, the seismic center, was heavily ravaged. For example, the damages on basic infrastructures in the city are shown in the tables below.

	NUMBER	AMOUNT
ROADS	847	USD 337mil
RIVER	190	USD 83mil
BRIDGE	57	USD 219mil
EROSION CONTROL FACILITY	19	USD 16mil
ANTI-LANDSLIDE WORK	1	USD 0.1mil
SEWERAGE	15	USD 6mil
TOTAL	-	USD 661mil

#### TABLE 7 ESTIMATED DAMAGES ON BASIC INFRASTRUCTURES IN A CITY (AS OF OCT 2016)

Compared to the annual GMP, the estimated damage on basic infrastructures accounts for almost 70%. Regarding the human damages, the number of deaths was 24 and 318 suffered from injuries. The earthquake did damages to agricultural sector which was totally equivalent to 407 million USD and to the forest industry which amounted 312 million USD. Furthermore, what is worse is that a number of touristic facilities has been in work cessation due to the destruction and a large majority of planned tourism tours has been canceled. Particularly, since one of the most vital economic resources to the city is tourism industry in the tertiary sector, these damages and cancellations negatively influenced the whole economy of Kumamoto Prefecture.

The affliction happened in A City, the value chains in the tertiary sector and the secondary sector had been partially disrupted. Several arterial transportation networks are still partially paralyzed. To make the matter worse, the volcano erupted and volcanic alert level was raised from 2 to 3 since October 2016 and has not been lifted. Consequently, the number of tourists is continuously declining.

<sup>(</sup>Source: Kumamoto Prefecture website)

#### **3** Background of "Star - Studded Sky" Roof Top Bar Fund

S hotel, a Japanese traditional hotel which suffered from damages by the earthquake, is trying to raise a fund to create the hotel's value-addition after the reconstruction of damaged buildings, which is to create a new facility to make use of the roof top to attract foreign tourists.

#### ⊘ History of S hotel

S hotel was opened in 1963. Up to 2016, the hotel is well known for a natural hot spring bath which has a history of over 100 years and surrounded by seasonally blooming trees and flowers and magnificent scenery of the mountains.

In 2012, there were only 350 tourists from abroad, but the number has been increasing to around 1,000 in 2013 and respectively reached 2,402 in 2014. Together with this increase, the hotel was highly appreciated with high satisfaction reviews from the foreign tourists on several travel websites such as Tripadvisor. Moreover, they won the "2014 Best Guest Review Award" from Booking.com. The hotel accommodated 3,205 of foreign inbound tourists and it accounts for 25% out of total guests who stayed at the hotel. Financially, the hotel consecutively recorded the highest operating income throughout 2014-2016.

#### ⊘ Damage caused by the earthquake

The earthquakes destroyed the pipe and pumping facility from the fountainhead of the hot spring, which was the lifeline for this traditional Japanese style hotel. The hotel was forced to temporarily suspend operation without this key content of the hotel for more than 3 months. Including the reconstruction, total costs for resuming was over USD 434,783 and S hotel asked financial support from a regional bank, with which the hotel has long-standing relationship.

Due to the continuous cut off of transportation, such as roads and trains, as well as the additional negative impact caused by continuous explosive eruption of the volcano in Oct 2016, the number of tourists was still far lower than that of before the earthquake. Especially, those foreign tourists which accounted for 25% of the hotel's guests were quite sensitive to the risk information about earthquake brought by mass media. In addition, a special support campaign for the Kyushu trip that was initiated by the Japan Tourism Agency to support those affected areas ends in December 2016, and continuous recess of tourist numbers is assumed.

#### A Key concept of "Star - Studded Sky" Roof Top Bar Fund

Even given this unfavorable business situation, the CEO has a new business plan to attract further inbound tourists more up to 50% of all tourists by 2020, considering this difficulty as a chance adversely to enhance the attractiveness of the hotel. As there are few bars in A City, the CEO found a potential business opportunity. Hence the hotel tried to raise the fund to reform the roof top as bar space, as summarized in the table below:

AREA OF BUSINESS	A City, Kumamoto Prefecture	
COMPANY NAME	S hotel Co., Ltd.(The hotel opened in 1963.)	
BUSINESS PROFILE	The hotel offers relaxing accommodation service with a traditional Japanese style of hot spring with high quality hospitality.	
BUSINESS SCALE	Revenue in FY2015 were USD 1,551,496 (before fundraising). It has about 70 employees.	
FINANCIAL CONDITION AND BUSINESS RESULTS	As S hotel is an unlisted company, the financial results are not disclosed. (However, its debts exceeded the assets when it raised funds according to the interview and Securite website). Although the revenue continue to increase gradually every year, and operating profit has been recorded before 2015. The profits turned into loss triggered by the earthquake. The working capital is mostly raised with loans from local bank and repaid on schedule.	

#### TABLE 8 OVERVIEW OF "STAR - STUDDED SKY" ROOF TOP BAR FUND

#### FIGURE 14 SCHEME OF STUDDED SKY" ROOF TOP BAR FUND



"Star-studded sky" Roof top Bar Fund

(Created by author)

#### $\odot$ Overview of the fund

The "Star-Studded Sky" Roof Top Bar Fund was offered through the Micro Investment Crowdfunding platform "Kumamoto Earthquake Support Fund". The contract between S hotel, a small business, and individual investors is under a form of anonymous partnership agreement. The fund is featured to compose of investment and donation by half and half.

#### $\oslash$ Feature of the fund

The fund scheme does not make significant difference from the post-disaster-type Micro Investment Crowdfunding created by MS. The overview of the fund is as bellow:

TABLE 9 FUND DESIGN "STAR - STUDDED SKY" ROOF TOP BAR FUN	TABLE 9 FUND DESIGN	<b>"STAR - STUDDED SKY"</b>	<b>ROOF TOP BAR FUND</b>
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MAXIMUM INVESTMENT TARGET	USD 91,304[10,500,000 JPY] (50% of each unit amount is donation.)	
UNIT AMOUNT (PER SHARE)	USD 93.9[JPY 10,800] (USD 43.5[JPY 5,000] as investment, USD 43.5[JPY 5,000] as donation and USD 7 [JPY 800]handling fees)	
FUND APPLICATION PERIOD	November 2016 to May 2017	
FUND OPERATION PERIOD	5 years (August 2017 to July 2022	
PROJECT PLAN	Year 1: Accommodation revenue (USD 1,723 K) *Complete repair of facility and opening a new construction of roof top bar. Year 2: Accommodation revenue (USD 1,774 K) Year 3: Accommodation revenue (USD 1,825 K) Year 4: Accommodation revenue (USD 1,874 K) Year 5: Accommodation revenue (USD 1,874 K) *Total revenue of 5 years: breakeven point at USD 7,737 K (annual average of USD 1,547 K)	
USE	Construction cost of the roof top bar ( USD 86 K as internal equipment and material cost, USD 4 K for contingency )	
RETURN	Up to breakeven point: 0.59% of revenue / 1,050 (no return payment when profit is below zero) After breakeven point: 0.59% of revenue / 1,050 (no return payment when profit is below zero) Return will be paid in a lump sum after Year 5. *111.6% when based on project plan	
FRINGE BENEFIT TO INVESTORS	One drink service at the roof top bar.	
PRINCIPAL GUARANTEE	No	

**G** Creative MSME financing supply

#### ⊘ Funding not for Rehabilitation, but for Reconstruction.

Technically speaking, there are three phases in post natural disaster recovery, that is to say, "Emergency Response", "Rehabilitation" and "Reconstruction" in chronological order.

#### **TABLE 10 NATURAL DISASTER RECOVERY PHASES**

PHASE	OBJETIVES	ACTIONS REQUIRED TO SMALL BUSINESSES
EMERGENCY RESPONSE	<ol> <li>Minimizing the damages</li> <li>Monitor secondary disaster</li> </ol>	<ul> <li>Emergency rescue,</li> <li>Evacuation,</li> <li>Building temporary offices and/or stores,</li> <li>Providing foods and daily necessities to employees, if necessary etc.</li> </ul>
REHABILITATION	1 Returning to the standard level of economic activities	<ul> <li>Restarting normal services,</li> <li>Rehabilitating building,</li> <li>Repairing machines and equi etc.</li> </ul>
RECONSTRUCTION	<ul> <li>Reconstructing and reorganizing the whole business operation</li> </ul>	<ul> <li>Reviewing the business plan to optimize the existing management resources.</li> <li>Reconstructing the facilities</li> <li>Purchase necessary machines and equipment.</li> </ul>

#### Most of public subsidy and donations to the MSMEs damaged by natural disasters are for emergency response and rehabilitation in theory, so that their business operation can utilize such public support to returns to the status prior to the natural disaster occurrence. The effectiveness of these financial supports is measured by sufficiency and speed.

The Kumamoto Earthquake Support Fund is designed to provide financial support to the MSMEs which are in the phase of "Reconstruction". As for time for fundraising, Micro Investment Crowdfunding takes longer than that of donations. Furthermore, the Micro Investment Crowdfunding needs to target the small businesses that have enough financial capability to pay the financial returns exceeding the par value, as previously described. In that sense, the urgent financial needs in "Emergency Response" and "Rehabilitation" phases conform less from Micro Investment Crowdfunding perspective. Also, it is difficult to expect profitability from initial donations in those early phases. Simple donations may fit well especially to the first two phases since the goals in these phases are not generating profits but responding to more urgent needs and sustaining the

minimum activity of small businesses. Bank loans and investment funds are more suitable for the last "Reconstruction" phase because investors and lenders can expect financial return from the investment. The diagram below shows the fitness of funding modalities to the financial needs of small businesses.



FIGURE 15 COVERAGE OF FINANCIAL SUPPORT (DISASTER SUPPORT)

(Created by author)

#### ⊘ "Half investment and half donation fund"

Both portions have a significant effect, the donation portion attracts investors as supporters, and the investment portion encourages small businesses to make returns to those investors/supporters by improving sustainability and profitability through optimized revenue under business operation. Moreover, financial cost of the Kumamoto Earthquake Support Fund is set lower than other Micro Investment Crowdfunding arranged by the CEO of S hotel considers that people investing in this fund likely to become S hotel's potential customers as well as investors. Moreover, as this investment will be matured after 5 years, a small business can develop relationships with investors for a long term. At present (2016), though the fund has just been created, the number of customers visiting their website is increasing. In this regard, fundraising through Micro Investment Crowdfunding greatly helps to draw people's attention to innovative projects.

#### ⊘ Transparency about usage of money funded though Micro Investment Crowdfunding.

In the case of conventional types of donation, investors cannot see how their money is actually used (e.g. Red Cross). In the case of Micro Investment Crowdfunding however, the investors can select a small business with a specific project, of which they can visually see the impact of their investment. Once the fundraising is successfully completed, a small business regularly reports their status, and maintains either direct or indirect relationship with the investor. Micro Investment Crowdfunding helps to anchor investors' empathy both on the small business and products/services.

#### ⊘ "Equity-Capital-Like-Debt-Borrowings"(ECLDB).

As mentioned in Chapter 2, if a small business wishes to have money recognized as capital, anonymous partnership agreement is required to meet some requirements in accordance with the guidance by Financial Services Agency. The below is the results of examining eligibility of the "Star-Studded Sky" Roof Top Bar Fund as in terms of "capital" classification:

# TABLE 11 RESULTS OF EXAMINING ELIGIBILITY OF THE "STAR - STUDDED SKY" ROOF TOPBAR FUND

	CONDITIONS	RESULTS
#1	The borrowing is not required to be repaid specifically over five years	Eligible (The duration of fund is over 5 years)
#2	The borrowing is repaid in a lump sum.	Eligible (Financial return including the principal is to be paid after 5 years)
#3	The borrowing is subordinated in case of legal bankruptcy	Eligible (The investor could receive their financial returnsubordinated to ordinal creditors)
#4	The borrowing should not be secured in principle	Eligible (The investment is not covered by any collateral)
#5	The financial return should be paid based on the sufficient corporate earnings for financial return .	Eligible (In case of the lack of accumulated earnings, the financial return would not be paid)

Comparing the conditions applied to the fund and the required conditions of ECLBD, the fund is possibly recognized as 'equity' by banks. The scheme is advantageous both to small businesses and to financial institutions because it can improve the soundness of financial condition if the raised fund is recognized as a capital, so that the small business could improve its credit capability and banks can extend new loans in some cases.

## 3.5 Observations on Micro Investment Crowdfunding

#### **1** Fundraising speed

"Half investment and half donation fund" would fit to financial needs of the MSMEs in the reconstruction phase. On the other hand, public attention to the damaged areas may be declining while time is going by; therefore, if it takes long time before offering funds, it would get somehow difficult for MSMEs to successfully raise the expected amount of money through Micro Investment Crowdfunding. This uncertainty of funding makes small businesses reluctant to develop a mid-term and long-term business plan. It is very important to make the fundraising process as quick as possible in order that small businesses can raise the funds to meet the financial needs for the reconstruction after natural disasters.

#### **2** Flexibility of Balance between Investment and Donation

At present, MS only has one selective option for the donation portion in the fund: "half investment and half donation". As shown above, for the financial needs of MSMEs right after a large natural disaster, donations are the best fit for emergency response and rehabilitation. Thus, another consideration is that if MSMEs can have a flexible discretion to determine the share of donation in the raised fund in response to target stage of post natural disaster support, a Micro Investment Crowdfunding becomes more user-friendly to damaged small businesses and widely utilized efficiently to appropriately hedge the risk to be taken by investors.