

Asian Villages
Comparative Studies:
Challenges and
Opportunities in
Pandemic Era

Editor: Daniel Hermawan







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Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era

Donations

Isolation

Leadership

Local wisdom

Money or goods that are given to

To separate something from other

things with which it is connected or

The set of characteristics that make

The ability from, existing in, serving, or responsible for a small area, espe-

cially of a country to use knowledge

and experience to make good deci-

mixed

a good leader

sions and judgments

Glossary

A situation in which someone is

ing an organization or government

(moving control from a single place

To change something such as a

document to a digital form (a form

An area of a country or town that

has fixed borders that are used for

official purposes, or that has a par-

ticular feature that makes it different from surrounding areas

that can be stored and read by com-

to several smaller ones)

puters)

Accountability

Digitalization

District

help a person or organization, or the responsible for things that happen act of giving them and can give a satisfactory reason for them E-commerce The business of buying and selling goods and services on the internet Agrarian Relating to the land, especially the use of land for farming **Egalitarian** Believing that all people are equally important and should have the same Ancestral Any member of family from long rights and opportunities in life ago, for example, the grandparents of grandparents **Empowerment** The process of gaining freedom and power to do what you want or to **Bureaucracy** A system for controlling or managcontrol what happens to you ing a country, company, or organization that is operated by a large num-Governance The way that organizations or counber of officials employed to follow tries are managed at the highest levrules carefully el, and the systems for doing this Caste A system of dividing Hindu society Humanitarian A person who is involved in or coninto classes, or any of these classes nected with improving people's lives and reducing suffering Ceremony A set of formal acts, often fixed and traditional, performed on important Incubator An organization that helps people social or religious occasions to start new companies, especially ones involved with advanced tech-Charismatic Used to describe a person who has nology charisma Indigenous Existing naturally or having always Community The people living in one particular lived in a place; native area or people who are considered as a unit because of their common Innovation The use of a new idea or method interests, social group, or nationality County A political division, forming the larg-Intervention The action of becoming intentionally est unit of local government, or the involved in a difficult situation, in orlargest political division of a state der to improve it or prevent it from getting wors Decentralization The act or process of decentraliz-

Lockdowns	An emergency situation in which	Rural	In, of, or like the countryside	
	people are not allowed to freely en- ter, leave, or move around in a build- ing or area because of danger		Agreement between and support for the members of a group, especially a political group	
Merger	An occasion when two or more com- panies or organizations join together to make one larger company	Subsidy	Money given as part of the cost of something, to help or encourage it to happen	
Mitigation	The act of reducing how harmful, unpleasant, or bad something is	Sharia	The holy laws of Islam that cover all parts of a Muslim's life	
Prefecture	A political region or local govern- ment area in some countries, for example Japan, France, and Italy	Symptom	Any feeling of illness or physical or mental change that is caused by a particular disease	
Province	One of the areas that a country or empire is divided into as part of the organization of its government, which often has some control over	Township	A unit of local government consist- ing of a town and the area surround- ing it	
	its own laws	Urbanization	The process by which more and	
Quarantine	A specific period of time in which a person or animal that has a disease,		more people leave the countryside to live in cities	
	or may have one, must stay or be kept away from others in order to prevent the spread of the disease	Vulnerable	Able to be easily physically, emotionally, or mentally hurt, influenced, or attacked	
Recovery	The process of becoming well again after an illness or injury			
Resilience	The ability of a substance to return to its usual shape after being bent, stretched, or pressed			

Foreword

Coordinating Ministry for Human Development and Culture of the Republic of Indonesia

The Covid-19 pandemic has been going on for more than 1.5 years. Not only Indonesia, but also other regions in Asia, and even the whole world is experiencing it. Millions of people died and hundreds of millions have been exposed to Covid-19. State's and government's resources are allocated as much as possible to cover the needs of the health sector in order to control the Covid-19 pandemic.

As a prerequisite for suppressing the transmission of Covid-19, restrictions on community activities and movements have been implemented. This situation has put pressure on the non-health sector, and the most significant is on the economic sector, as indicated by rising unemployment and declining business performance. Likewise with the social sector, which is marked by a significant increase in the number of poor people.

Now, especially after vaccines and drugs have been discovered and administered, the Covid-19 pandemic seems to be getting under control. Governments in various countries have begun to implement easing policies in the context of economic recovery, especially to restart business activities. However, economy recovery demands for several requirements.

First, by keeping the Covid-19 pandemic under control, economic recovery must be carried out in innovative ways by relying on information and communication technology. Second, the health protocol is an adaptation of new habits that must continue to be practiced, because no one knows when the Covid-19 pandemic will end, it has even been predicted to last for quite a long time. Third, villages and rural areas are suitable places for economic recovery because business activities in villages and rural areas are generally simple to develop and are related to the provision of primary/basic needs with the currently high market demand.

The book Asian Villages Comparative Studies: Challenges and Opportunities in the Pandemic Era deserves appreciation and this is quite a proper moment to have it published. The reason is that various countries and regions in Asia are experiencing the same problem, namely the Covid-19 pandemic. In addition, there are many similarities between countries and regions in Asia, especially in terms of culture, social order, level of development progress, and so on. Thus, learning among countries and regions in Asia becomes relevant and the suitability for application can be ensured.

Jakarta, October 2021

Dr. Herbert H.O Siagian

Assistant Deputy for Regional Empowerment and Spatial Mobility

Coordinating Ministry for Human Development and Culture

of the Republic of Indonesia

Foreword

Parahyangan Catholic University (UNPAR)

A prosperous and sustainable village is certainly the dream of all parties. Therefore, various efforts are made through various programs in development carried out in villages and in all aspects, both human and non-human. Indonesia, which has tens of thousands of villages, is of course very interested in trying to build villages in all existing areas. In this case, the Indonesian government has issued various policies related to village development, including in terms of funding.

During the Covid-19 pandemic, which is still ongoing, the government has issued many policies related to handling the impact of the pandemic on the economic and social life of villagers. However, not a few villages in Indonesia are innovating with various programs and activities, even those that utilize digital technology in order to overcome the various challenges faced during this pandemic.

Experience in building and innovating in villages is of course experienced by many countries in the world. Of course, various problems and success stories have also been experienced in running the program, and also in dealing with the Covid-19 pandemic in their respective countries. Therefore,

through this book entitled Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era, it will provide an overview of the experiences of villages in Indonesia, China, the Philippines, Japan, India, Taiwan, and Vietnam.

The experiences written down are more of best practices that have been carried out to create prominent and innovative villages, so that they have a positive impact on improving the welfare of villagers. In practice, the progress that has been achieved is made by utilizing digital technology that strongly supports various processes that can improve the performance of public servants, as well as in matters related to the production process. The innovations carried out do not mean abandoning local traditions including local wisdom, but instead they are used as the basis for further strengthening the progress of the village concerned.

This book writing project does not only aim to produce book that can be published, but also aims to build international network and collaboration between experts, both academics and practitioners who are concerned with village development and innovation. Another goal is that the writing of this book can be the beginning of the formation of an international forum of experts who provide advice on village issues. A forum that is not only limited to the Asian region, but also to other regions in Africa, Australia, America, and Europe.

We express our gratitude to the contributors of writings from these 7 countries. Thank you to Mr. Herbert Siagian from Coordinating Ministry for Human Development and Culture Republic of Indonesia, who really supports this activity and also its sustainability. Thank you to Mrs. Mian Manurung from Friedrich-Ebert-Stiftung Germany, the Indonesian Representative Office who continues to support both in material content and financial, especially those related to village development and innovation

issues. Also thank you to colleagues from the Center of Local Excellence (COLE) UNPAR Bandung: Theresia Gunawan, Daniel Hermawan, and Riswanda who were not only writing articles, but also organizing the project for this book. Hopefully the ideas contained in this book can be a constructive and contributive inspiration for those who are concerned about village development and innovation.

Bandung, October 2021

Dr. Pius Sugeng Prasetyo

Project Coordinator

Foreword

Friedrich-Ebert-Stiftung (FES)

The emergence of the COVID-19 pandemic has intervened in life processes and posed an obstacle to all aspects of people's lives in a country, starting from the central level of governments to the village administration. The massive spread of the virus has put massive burden on the health sector and led to economic recessions that have occurred in almost all countries. This is a challenge both for village community and administration. This inter-village comparative study entitled "Asian Villages Comparative Studies" aims at mapping the good practices that have been successfully carried out by various villages in overcoming the COVID-19 pandemic based on their local advantages and potential, both in terms of leadership, natural potential, human resources, and various other aspects in Asia.

In this book, we present eight articles that seek to provide a comprehensive understanding of the role of villages in overcoming the COVID-19 pandemic, starting from China, the Philippines, Indonesia, India, Japan, Taiwan, and Vietnam. Villages as a source of life for a country, especially in terms of food supply, have proven to be capable of becoming the frontline in fighting hunger in the Philippines, which is accommodated by the role of CSOs. This is discussed in the article *Community Leaders as Front Liners Against Hunger During the Pandemic* by Mark

Lawrence B. Cruz of the Gawad Kalinga Community Development Foundation, Inc., Philippines.

Advances in digitalized technology also play an important role in elevating the local potential of a village into an advantage that can support the economic sector. Both Sherry Tao Kong, PhD., Associate Professor at the Institute of Social Science Survey, Institute of Digital Finance from Peking University in his writings entitled Rural Development through E-commerce in China: A Case Study of Wuyi County in Zhejiang Province and Thai Thanh Ha, PhD., Associate Professor at Foreign Trade University, Vietnam, discuss this phenomenon from the perspective of e-commerce and smart villages that are able to bridge rural economy to a wider scale.

The implementation of village policies based on the collective action of village communities in dealing with the COVID-19 pandemic crisis situation in Andhra Pradesh, India, was described by Dr. Suneel Kumar Chitturi from the University of Delhi in a piece with the title COVID-19, Welfarism, and Village Administration: A Case Study of Duggiralapadu Village in Andhra Pradesh State of India. Dr. Theresia Gunawan and Dr. Pius Sugeng Prasetyo from Parahyangan Catholic University (UNPAR) wrote about the role of transformative figures and leadership in addressing digitalization in Panggungharjo Village:

Innovation through Digitalization during the COVID-19 Pandemic.

The charm and attractiveness of a village that comes from local wisdom, as well as from an innovation in packaging village potential into a product for the tourism sector with the support of visionary leadership that is proven to be able to bring Inakadate Village to be widely known by the public, is written by Tetsuya Endo, Ph.D. from Aomori Public University Japan, with the title The Case of "Rice Paddy Art" of Inakadate Village in Aomori Prefecture in Japan under the COVID-19 Pandemic. In addition, the power of socio-cultural innovation enriched by local wisdom is discussed in the article Reconstructing Village's Innovation in Pandemic Period: Human Development and Cultural Perspective of Nagari Situjuah Batua, which was presented by Dr. Riswanda and Daniel Hermawan from UNPAR.

The role of the community in disaster management and governance carried out by the Hsin-Kang Foundation of Culture & Education, as well as trust as the keys to resilience that can help control the COVID-19 pandemic as a preventive effort from 23 communities in Hsin-Kang, Taiwa was examined by José Chiu-C Chen in his writing, Hsin-Kang Community Foundation and COVID-19 Pandemic in Taiwan.

We hope that this comparative desk study from villages in seven countries in the above Asian regions can serve as a valuable lesson for other villages in Asia, especially Indonesia. With the understanding that each village has different potentials and resources, the good practices shown in this book are expected to inspire and maximize local advantages and innovations that villages have during the COVID-19 pandemic to continue to bring pros-

perity to the residents. Villages can certainly play an active role, especially on a micro scale to empower communities in facing crises with the support of a strong leadership that is visionary, sensitive and responsive to change, with expertise in packaging natural potential, agility in networking and adaptive to technological developments, in addition to the ability to capitalize on local wisdom, which can play a role as a catalyst in village development.

With the completion of this study, allow me to extend my gratitude and appreciation to the UN-PAR team led by Dr. Pius Sugeng Prasetyo for their efforts to organize virtual discussions by inviting academics from various countries and coordinating the research-writer team, as well as compiling guidelines for writing this book. I would like also to extend my gratitude to the FES government partners in Indonesia, namely the Coordinating Ministry for Human Development and Culture, in particular to the Assistant Deputy for Regional Empowerment and Spatial Mobility, Dr. Herbert Siagian, M.Sc. and its ranks.

We hope this book can benefit various stakeholders, the government, academics, and especially the village apparatus and communities in preparing development programs during the COVID-19 pandemic..

Enjoy the book.

Jakarta, October 2021

Dormiana Yustina Manurung

Program Coordinator FES Indonesia Office

Community Leaders as Front Liners Against Hunger During the Pandemic

Mark Lawrence B. Cruz

I. Pandemic Hunger

Self-rated hunger in the Philippines has been hovering around 10 to 15% over the past 20 years, hounding roughly around two to three million families annually. These numbers come from surveys that are taken four times a year by the Social Weather Stations, where respondents are asked if "in the last 3 months, did it happen even once that your family experienced hunger and not have anything to eat?"

In October 2020, approximately six million households (30.7% of Filipino families) joined the ranks of those who do not have enough food. This is a direct result of not being able to go to work due to the extended period of lockdowns put in place to curb the spread of the COVID-19 virus. The global health pandemic was triggering a rapidly growing humanitarian crisis specially among the poorest families.

"Mamamatay kami sa gutom, hindi sa virus" (We would sooner die of hunger than the virus) was a very strong sentiment expressed by many. For most, the greatest fear during this pandemic was getting infected, but for the poor the greater fear was the inability to silence the daily rumblings of their stomachs. They can avoid the virus, but they cannot escape hunger.

Figure 1. Fourth Quarter 2020 Social Weather Report



This surge in hunger was met by waves of unprecedented social support from government and an equally massive outpouring of generosity from private individuals and institutions. Family food packs and cash were regularly distributed by local and national government to the neediest segments of the population during the most stringent lockdowns that lasted from March to May 2020.

Private sector donations and initiatives complemented the support from government in a bid to ease the suffering of their fellowmen. Eventually public transport and commercial establishments resumed operations albeit at greatly reduced capacities. The resumption of some work and the massive public and private support contributed to the drop-in hunger rates from 30.7% to 16% by November 2020. This was a huge improvement from the all-time high recorded in the previous month, but still sits on the high side—hunger was reduced but has not really abated. It continues to hound approximately 17.6 million Filipinos, 7 million of whom are children under 12.

Hunger affects all members of the families but unleashes its most devastating effects on children and pregnant women. It is this particular aspect of hunger and nutrition that deeply concerned Gawad Kalinga Community Development Foundation (GK) and propelled them to launch and operate one of the largest feeding programs for children in the Philippines.

II. Gawad Kalinga

The mission of Gawad Kalinga ("to bestow care") started with a desire to effect transformation among disadvantaged youth in the largest slum area of Metro Manila in 1995. The forerunners of the work quickly discovered that whatever change they achieved with the youth can only be sustained with similar transformations in the family, which in turn can only be nurtured by corresponding changes in the larger

community. What started out as a youth program quickly evolved to become a family and community building effort.

The founding years allowed GK to live and learn from the poor themselves and emboldened them to formally establish as a non-profit in 2003. Since then, its workers and volunteers have organized and built 3,000 communities all over the Philippines directly benefitting around 100,000 poor families. They have also established working relationships with 10,000 of the 40,000 *baranggays* (the smallest unit of government, mostly village-level) across the 7,000 islands of the archipelago.

In these many years and extensive networks of interaction GK has learned that poverty is a multi-faceted reality that requires simultaneous and sustained interventions from all sectors of society. This perspective allowed it to innovate and evolve many initiatives and programs through the years, such as *Kusina ng Kalinga* (KnK or Care Kitchens)—its flagship program to address chronic hunger and malnutrition among children.

Figure 2. Kusina Ng Kalinga Ecosystem



Prior to the pandemic, KnK operated a network of 160 central kitchens that provided at least 1 warm and nutritious meal to approximately 100,000 pub-

lic school children. Each kitchen is designed to prepare at least 1,000-2,000 meals every school day for a 220-day period. These central kitchens also allowed GK to respond to the food needs of families affected during natural disasters and man-made calamities. The experience and lessons from these kitchens were instrumental in crafting the National Feeding Law of the Philippines that was put in place in June 2018.

GK was in the thick of working with the Department of Education and various local government units in preparing to roll out this new law that would effectively benefit millions of public-school students. For its part, GK was targeting to create impact for at least 1 million children for the school year 2019 to 2020. All these actions and dreams were brought to a sudden halt because of the pandemic. Students were studying from their homes and mass gatherings were in most cases strictly prohibited.

This situation gave rise to a very difficult dilemma for Gawad Kalinga: hunger was on the rise and GK had the technology to prepare and provide thousands of meals for those who need them, but it cannot mobilize its kitchen teams and targeted beneficiaries without risking them or violating health protocols. KnK created impact through its massive and large-scale approach, but this core strength became its primary liability due to the pandemic. This difficult moment paved the way for the poor and their communities to emerge as the front liners against hunger during the pandemic.

III. Community Kitchens

The prohibition of mass gatherings and restrictions in public mobility made it almost impossible to open and operate the central kitchens, but it was also very clear that not providing food was not an option. A way forward had to be found and forged. The opportunity for a solution came in the difference in

location of the central kitchens. Majority of the central kitchens were built inside the premise's public schools, but a select few were built inside the confines of GK communities.

Formerly, these community-based kitchens proved more challenging to operate as they were located at a distance from where the meals were served and where parents volunteers were aplenty. This distance created delays in mealtimes, accidental spillage, and gave rise to regular communication challenges. Prior to the pandemic, these community-based kitchens were only established where a school-based set-up was not possible. But as turning of fates would have it, these 'unpreferred kitchens' were the only ones that could be operated since all public schools were closed due to the suspension of face-to-face classes.

While it was painful to not be able to provide as many meals as possible, these community-based kitchens were opened and operated but were instructed to provide food only to those living in their neighborhood and those within the government-allowed proximity of their communities. This 'experiment' started out in May 2020 and was slowly expanded from June to September as adjustments and tweaks were being discovered and implemented in order to adjust kitchen operations to the new normal.

But in October, GK made a massive call for action as an immediate response to the spike in self-rated hunger. This massive action aimed to raise awareness about the hunger crisis that was worsened by the COVID-19 pandemic. The modest goal was to provide meals for one day for 10,000 children in 100 locations, but the overwhelming response provided meals for 75,000 kids in 630 locations nationwide.

Almost all of these locations were driven by community action and volunteerism, where the volunteer parents provided all the ingredients, supplies, and labor. It was clear that families and communities can and will band together to address hunger when given the appropriate platform and facilitation. This one-day showdown of heroism was covered by a six-hour Facebook live show that allowed stories and inspiration to flow from one location to the other. The experiments of the earlier months definitely paved the way for the monumental October 10-10 event (feeding 10,000 kids on October 10), which eventually convinced GK to formally launch a remodeling of its approach from central kitchens to community kitchens.

This new approach demanded the following fundamental changes to the KnK model:

- Scaling down the output of each kitchen from a minimum of 1,000 meals to a maximum of 300 per community kitchen.
- Limiting the reach of beneficiaries from an extensive network of multiple schools and barangays as far as 10-15 kms to a mere 500-1,000 meters from the kitchen's location.
- Transferring the operations from hired project staff to community volunteers—mostly the parents of the beneficiaries.
- Translating the capacity building and quality assurance processes from on-ground visits to online platforms and interactions, including financial transactions.
- 5. Moving the focus of leadership from program managers to community leaders.

On the surface these changes appear to have shrunk the reach, scaled down the impact, and slowed down the growth of the program. However, in the course of operations from May 2020 to June 2021, the community kitchens have attracted the interest and involvement of so many institutions and individuals who until then were not engaged in the problem of hunger. The community kitchens which aimed to address chronic hunger and improve nutritional status inspired the establishment

of community food hubs, which had a more modest aim of hunger mitigation.

Inspired by the sustained 120-day intervention period of community kitchens, these community food hubs aimed to feed only for as long as their donated supplies last and thus become an avenue for those not affected by hunger to directly help those who are hungry in their community. The 57 community kitchens that provided for 24,844 kids for 120 days became a model and inspiration for the establishment of 133 community food hubs, which made food available for an average of 2 days a week for at least 60,000 beneficiaries, majority of whom are kids under 12.

These two modalities of delivering food to the hungry at the community level were fueled and sustained by the generous volunteerism of parents and community leaders, the *bayanihan* (community cooperation) of many individuals and institutions, and the technical guidance provided by KnK program managers. Thus, in the course of the pandemic, GK was able to establish and operate a network of 190 kitchens that engaged 625 communities where 87,199 children received a total of 2,428,086 meals.

While there was a reduction in former metrics such as kids fed and schools reached, there was definitely a newfound deepening and widening of participation in the program. KnK was rapidly growing its wings prior to the pandemic, but the sudden changes brought about by the health crisis allowed it the opportunity to deepen its roots and thus poising it for a chapter of innovation, evolution, and growth.

Figure 3. The List and Locations of Community Kitchens Established over the Pandemic



Figure 4. A Visual Map of Kitchen Locations Showing the Extensive Nationwide Presence of KNK across the Philippine Archipelago



IV. BUKTAMACO Community Kitchen, Brgy. Uno, Malaybalay City, Bukidnon Province

This community started a food hub through an initial donation of several boxes of canned tuna and few cavans of rice. It was an initiative started by the

leaders of the Bukidnon Tagoloanon Muluhaya Ha Kabukalagan Agriculture Cooperative (BUKTAMACO) — the economic organization of the Bukidnon Tagoloanon people. This indigenous group are among the major cultural groups of Bukidnon Province, and they are distinguished as the inhabitants and stewards of the source of the Tagoloan river, which flows from Malaybalay City towards Cagayan de Oro City in the northern part of Mindanao Island.

The food hub was established within their ancestral domain to cater to the families who lived near the city's old sanitary landfill. Many of these families generated income from scavenging activities on the landfill, but such activities were recently prohibited by a local ordinance for the health and safety of the families. The lockdowns only aggravated the situation of these families.

This urgency is what prompted BUKTAMACO to work with GK in establishing a food hub: GK provided the canned tuna and they counter-parted with labor and location of the kitchen. Then they both had to depend on the response of other partners to complete the ingredients and supplies to provide meals for the kids on a regular basis.

Their leap of faith proved right when a local meat shop pledged to provide meat every Friday, a local businessman committed rice that could last for several months, and local farmers provided vegetables. What started out in February 2021 as a 1-month effort to respond to the needs of 300 hungry kids in the old landfill eventually grew to become a major focal point not only for the tribe, but for the community at large to be involved in the effort to address hunger during the pandemic.

News of the kitchen spread to neighboring communities and soon enough children from these nearby villages started showing up during meal-time—some of them walking as far as 3 kilometers just to receive a meal. This prompted GK and BUK-TAMACO to evolve this food hub into a community



Figure 5. Volunteer parents distributing food when the children cannot pick-up their meals from the kitchen. Truly going the extra mile to make sure that kids do not go hungry under their watch.



Figure 6. Local farmer's cooperatives provide regular donation to the community kitchen.



Figure 7. Typical meals from the kitchen will include rice and vegetable-based viand. These meals are served in lunch boxes that are picked up from the kitchen by the children and/or their parents.



Figure 8. The leaders and movers behind the BUKTAMACO community kitchen (L-R): Mark Lawrence Cruz, Program Head of KnK; Harvey Maraguinot, Program Head for GK's Community Farming Program; Dan Bercasio, Executive Director of Gawad Kalinga; Atty. Burt Estrada, President of BUKTAMACO; Brgy. Councilor Johnny Dumala; John Lloyd del Rosario, Program Manager of BUKTAMCO

kitchen and training center for other communities to follow suit. To date, two more kitchens have been established by other nearby communities following the model and template of BUKTAMACO.

Their efforts have since received support, commitment, and partnership of more local businesses and even the provincial local government. What started out with kitchen volunteers armed only with canned tuna products grew to become a network of hunger warriors that has been addressing hunger for 500 kids over the past 6 months.

V. Emerging Lessons

The experience of BUKTAMACO is fortunately not an isolated event. The same leaps of faith and outpouring of solidarity unfolded in the 190 community kitchens and food hubs. Far from diminishing the program, the pandemic ushered in a new modus operandi for the KNK program.

Prior to the pandemic, the program was mostly fueled by the cash donations of big national and international donors. However, the pandemic opened floodgates of generosity from local partners and showed that local institutions and individuals will and can effectively respond to the hunger happening in their towns and backyards. After almost 10 months of facilitating this massive network of community-led, anti-hunger efforts, GK is yet again refreshed, enriched, and emboldened by the following lessons:

 The poor are the most effective front liners against hunger. They are closest to where hunger occurs: in their very families and communities. While many of the parents and community volunteers lack food for themselves, they are moved, inspired, and sustained by their newfound capability to prepare and provide regular meals for hundreds of children in their village.

They often share that they can endure their own

hunger, but they are devastated by the hunger of their children. Thus, to find themselves playing the pivotal role in ending hunger for their children and the children of their neighbors is a truly transformative experience for many of them. This points to the fact that the poor are not mere beneficiaries of social programs but are valuable assets that have not been tapped nearly enough.

Community leaders can manage the intricacies of kitchen operations with ample support and supervision from program managers. Beneficiaries can quickly become benefactors if and when given the chance. This lesson has the potential to revolutionize not only the KnK program, but even GK as a whole. It challenges the very organization to reflect and reconsider the role given to the poor in terms of program operation and management.

2. Local individual and institutions are big partners for sustained engagement. Going after major development partners who can provide massive resources is not a wrong approach, but it is definitely an incomplete strategy. The gains from engaging national and international partners are significant but are oftentimes short-lived and sometimes even imprison and consume non-profits into running after the milestones of annual project cycles.

Pursuing local partnership require a very different mind and skill set from that of securing grants and big donations. These local partnerships are driven by trust, relationships, and direct experience. The engagement of many local partners for the community kitchens and food hubs began with a trusted acquaintance inviting them to visit and volunteer in the kitchen. This direct encounter with the frontline operation (within local health protocols) and the beneficiaries themselves cause them to ask, "what else can I do to help?"

This moment of awakening can be the beginning of their journey of engagement in building better versions of their towns where kids do not go hungry because of their caring and sharing. GK is anchored on the principle that when a community decides to care and share whatever little they have there will be none who will be needy among their midst.

3. Technology as a key to hastening the response to poverty. Admittedly, there was much doubt whether the volunteer parents can comprehend and much more implement the rudiments of running a daily feeding program. This seemingly ordinary intervention actually involves dozens of policies and processes that range from recipe development, fund management, food safety and sanitation, purchasing, volunteer management, and partnership engagement—actions that often require fulltime staffing. The pandemic forced the simplification of the program details in order to facilitate effective communication through online channels and encounters.

Without the benefit of face-to-face trainings and encounters, the program managers were forced to translate the policies and processes in the simplest possible terms and ways of thinking and doing. The limitations that come with online encounters forced the simplification of the program. It also allowed more regular and innovative interaction between programs managers and kitchen volunteers.

Furthermore, volunteers from various kitchens were also able to directly interact and learn from each other. It also allowed many among the poor who are not in the traditional banking system to optimize the use and benefits of online financial systems, such as e-wallets and online banking. This cross-pollination of ideas, strategies, and tools served to enrich and diversify the modes of program implementation.

These are just some among the many lessons

that are emerging from the experience of shifting from central kitchens to community kitchens. This move was initially thought of as a temporary pivot to allow GK to respond to hunger during the pandemic but has strongly evolved to become a fundamental shift in the very model of Kusina ng Kalinga. Because of the pandemic, there is now greater emphasis on the value and role of local leaders, volunteers, and partners. The campaign against hunger was brought to the consciousness and reach of the ordinary individuals and institutions and inviting them towards an extraordinary commitment to leave no one behind most specially during this pandemic.

These experiences and innovations factor into GK's over-all approach in pursuing the goals of zero poverty (SDG 1) and zero hunger (SDG 2) through the formation of massive alliances and partnerships (SDG 17). Concretely, it invites GK towards a more localized rather than centralized response by engaging not only national government units but the smallest unit of governance in the Philippines: the baranggay. This has always been a part of the development model of GK, but only during this pandemic did it have the occasion to witness and benefit from the flexibility, responsiveness, and effectiveness of the baranggays.

These village-level governance units are the parts of the bureaucracy that have the most intimate and immediate sense of the pulse and needs of the most common Filipino who are mostly poor and hungry. The shift towards working more closely with these barangays has been hastened by the KNK experience during the pandemic in the hopes of creating deeper and more lasting impact to improve the lives of the poor for good. It is also a concrete living out of the invitation of the SDGs to leave no one behind beginning with those at the farthest frontiers.

The cure for the COVID-19 virus has just recently been discovered but the antidote to hunger has been with us all along. Our collective caring and sharing is the lasting solution to end hunger among children. Hunger ends where caring begins. Visit Kusina ng Kalinga on Facebook to know more about the program. You can also check out the GK website for more information and reference materials: www.gk1world.com.

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www.gk1world.com.

Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era

Hsin-Kang Community Foundation and COVID-19 Pandemic in Taiwan

José Chiu-C Chen

I. Hsin-Kang's Historical and Geographical Information

1.1. Hsin-Kang's Historical Background

The name of Hsin-Kang originates from the "Hsinnankang" in the Jiacing Period of the Qing Dynasty. The four biggest villages in the central area of Hsin-Kang Township are new settlements formed by the people who moved from Zhangzhou to Mayuanliao. Currently, the administrative region of the Township is divided into 23 villages, covering the Bengang, Damaosibao, and Niouchousibao (Sialiou Village) of the Qing Dynasty.

In 1621, immigrants were attracted to exploit here, and settlements were formed. By the early Kangsi Period of the Qing Dynasty, Bengang was a port of external trade and had become a prosperous town. Many people in business gathered in Bengang, and it became the biggest town in the offing of Taiwan. By the mid 18th century, the Bengang Township with densely distributed ships and carriages had been called "Small Taiwan".

With a series of settlement fighting and the frequent flooding of Bengang River, the Zhangzhou immigrants in Bennangang moved to Mayuanliao, located in the southeast of Bennangang, in the early Jiacing Period of the Qing Dynasty. So Mayuanliao was called Sinnangang (the New Nangang), and the original Nangang Township was called Jiunangang (the Old Nangang). Later the Old Nangang lost its function as a port gradually. It is due to the sedimentation of the riverbed and was finally degraded to a village.

As a new settlement extended from the ancient Bengang, Sinnangang continued the history, culture, politics, economy, and religious beliefs of the Zhangzhou people in Bengang. In the late years of the Qing Dynasty, the long name was abandoned, and it was renamed "Hsin-Kang". In the Japanese Colonial Period (1920), when the local administrative system was reformed, Hsin-Kang was renamed "Sinsiang" because there were several places named Hsin-Kang on the island, and the place was far away from the port. The name "Hsin-Kang" was recovered after World War II ended in 1945.

For more than 300 years, the time has brought significant changes to the place, and the residents have experienced the hard work of exploitation, migration, and regeneration. The town of great importance developed by the ancestors has left us many historical records, valuable cultural assets for the current generation.

1.2. Hsin-Kang's Geographical Information

In the prehistoric period, Hsin-Kang was once Hoanya Pingpu people and other indigenous people. Spotted deer were seen running here and there, and the fishermen and pirates from China and Japan sometimes stayed here for a rest. The ancestors called this river harbor Bengang. The probable location of Bengang is between the current Shueiyue Temple in Hsin-Kang and the Bishuei Temple in Beigang.

Now, Hsin-Kang Township is located in the northwest of Chiayi County and surrounded by the Township of Minxueng, Liujiao, and Belgang in the direction of clockwise (Figure 1). Hsin-Kang Township is 16 km away from Chiayi City, about 10 minutes from Chiayi Interchange of No. 1 Freeway through No.159 Highway. It borders Minsyong Township in the east and faces Beigang Township, Yunlin County across Beigang River in the west, Taibao City, Chiayi County across Puzih River in the south, and Yuanchang Township, Yunlin County across Beigang River in the north.

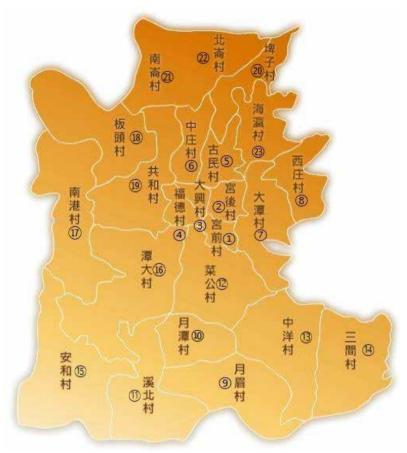
The township is of flat and plain terrain, with an elevation of 13 m. It is about 66 km^2 , accounting for 3.47% of the county's total area, 1901.67 km^2 . There



Figure 1. Location of Hsin-Kang Township & its neighbor townships

SOURCE: TESAS DATABASE

Figure 2. Administrative Map of Hsin-Kang Township¹



SOURCE: WEBSITE OF HSIN-KANG TOWNSHIP

are 4786 hectares of agricultural farmland, accounting for 72.5% of the total area of the township. The area under urban planning is only 543.36 hectares.

The administrative region of the township is divided into 23 villages (Figure 2). The central areas are "Gongcian Village, Gonghou Village, Dasing Village, Fude Village, Gumin Village, Jhongjhuang Village, and Datan Village." The biggest one is Tanda Village, which takes 11.15% of the whole town in terms of the land scale. Others ranked orderly are Jhong-

yang Village (8.25%), Datan Village (7.12%), Nangang Village (6.46%), Sibei Village (6.34%), Gonghe Village (6.19%), Caigong Village (5.97%), Anhe Village (5.64%), Haiying Village (5.45%), Nanlun Village (5.25%), Yuemei Village (4.48%), Sanjian Village (4.21%), Pizih Village (3.93%), Jhongjhuang Village (3.62%),Sijhuang Village (3.46%), Yuetan Village (3.27%), Bantou Village (2.71%), Gongcian Village (2.01%), Gumin Village (1.21%), Gonghou Village (1.11%), Fude Village (0.96%), Beilun Village (0.66%), and Dasing Village (0.58%).

II. Hsin-Kang's Demographical and Cultural Information

2.1. General Demographic Information

2.1.1. Population

The administrative region of the township is divided into 23 villages (Figure 2). The population is about 35,952 persons (until the end of July 2021). The central areas with the highest population density are "Gongcian Village, Gonghou Village, Dasing Village, Fude Village, Gumin Village, Jhongjhuang Village, and Datan Village." The subtotal population of the central area takes 42.5% of the whole township. However, the central area only takes 16.61% of the whole town in terms of the land scale. Among 23 villages, Beilun Village is the one with less population of 526 persons.

Analyzing the population structure of Hsin-Kang Township, the proportion of nuclear families

¹ ①Gongcian Village, ②Gonghou Village, ③Dasing Village, ④Fude Village, ⑤Gumin Village,⑥Jhongjhuang Village, ②Datan Village, ⑥Sijhuang Village, ⑥Yuemei Village, ⑥Yuetan Village, ⑪Sibei Village, ⑫Caigong Village, ⑪Jhongyang Village, ⑭Sanjian Village, ⑭Anhe Village, ⑭Tanda Village, ⑪Nangang Village, ⑭Bantou Village, ⑭Gonghe Village, ⑳Pizih Village, ㉑Nanlun Village, ㉑Beilun Village, ㉑Haiying Village

is getting higher. In 2003, there were only 9,620 households with a total population of 35,969 people. By 2020, the number of households increased to 10,846, with a total population dropped to 31,162. Within 18 years, the number of households has grown by 12.7%. Meanwhile, the total population has decreased by 13.3%.

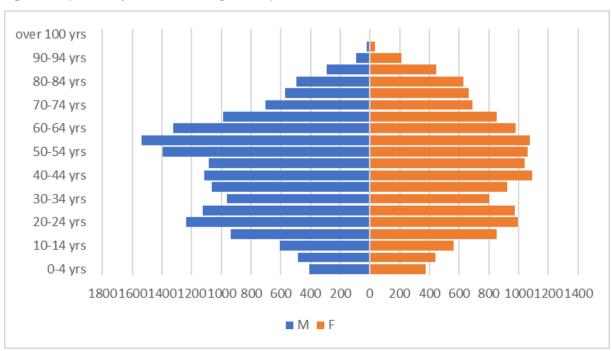
The data in Table 1 points out that since 2003, the population of Hsin-Kang Township has been dropped. The highest rate of change in a single year is -1.389%, and the lowest is -0.254%. On the whole, the population structure of Hsin-Kang Township presents the crisis of aging and a lower birth rate (see Figure 3 for details).

Table 1. Population of Hsin-Kang Township over the years

Year	Household N.	Male	Female	Total	Variation of Population	Variation of Percentage (%)
2003	9,620	19,163	16,806	35,969	-141	-0.390
2004	9,778	19,041	16,774	35,815	-154	-0.428
2005	9,876	18,969	16,755	35,724	-91	-0.254
2006	9,970	18,797	16,691	35,488	-236	-0.660
2007	10,048	18,683	16,683	35,366	-122	-0.343
2008	10,174	18,555	16,594	35,149	-217	-0.613
2009	10,293	18,471	16,524	34,995	-154	-0.438
2010	10,402	18,297	16,379	34,676	-319	-0.911
2011	10,437	18,057	16,174	34,231	-445	-1.283
2012	10,496	17,853	15,977	33,830	-401	-1.171
2013	10,551	17,716	15,791	33,507	-323	-0.954
2014	10,589	17,576	15,610	33,186	-321	-0.958
2015	10,637	17,311	15,486	32,797	-389	-1.172
2016	10,658	17,049	15,336	32,385	-412	-1.256
2017	10,647	16,509	15,126	31,935	-450	-1.389
2018	10,691	16,705	15,018	31,723	-212	-0.663
2019	10,715	16,575	14,845	31,420	-303	-0.955
2020	10,846	16,440	14,722	31,162	-258	-0.821

SOURCE: MINXIONG HOUSEHOLD REGISTRATION OFFICE IN CHIAYI COUNTY (2021.8.10)

Figure 3. Population Pyramid of Hsin-Kang Township 2020



SOURCE: TESAS DATABASE

2.1.2. Occupation of Population

The current main economic activity of Hsin-Kang Township is agriculture. According to official statistics in 2016, the farmers take 95% of all labor force in Hsin-Kang Township. Meanwhile, the national statistics is just 4.9%, and in 2020 it was 4.7%. The manufacturers only take 3% in the township (see Figure 4 for details). The national statistics were 26.8% in 2016. Over 69.5% of the land in Hsin-Kang Township is arable land.

Although the proportion of the agricultural population is high, the population structure has a crisis of aging and declining birth rates. In addition, rice planting is the main crop that requires more care and effort. Consider the population structure and the main agricultural activity in Hsin-Kang Township, the challenges ahead are easy to see.

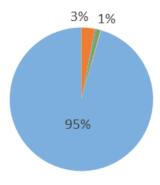
2.1.3. Educational Level

The education level of the citizens in Hsin-Kang Township is dominated by high school graduation, accounting for 28.7%, followed by college graduation for 20.7%, elementary school graduation for 19.1%, junior high school graduation for 16.1%, and junior college graduation for 8.7%. The master's degree is only 3.7%, the doctor's degree is 0.2%, and the illiteracy rate is as high as 2.3% (see Table 5 for details).

In comparison with the country-wide data of Taiwan, the illiteracy rate of Hsin-Kang Township is more than twice the national level and the education level of college or higher is more than 12% lower than the national data.

Figure 4. Occupational statistics of Hsin-Kang Township by the population number

- Mining and soil and rock processing industry
- Manufacturing
- Electricity and gas supply industry
- Water supply and pollution remediation industry
- Construction engineering industry
- Wholesale and retail trade
- Transportation and storage industry
- Accommodation and Catering Industry
- Publishing, audio-visual production, dissemination and information and communication services
- Finance and insurance industry
- Real estate
- Professional, scientific and technical service industry
- Support service industry
- Education
- Healthcare and social work services
- Arts, entertainment and leisure services
- Agricultural industry
- Other services



SOURCE: TESAS DATABASE

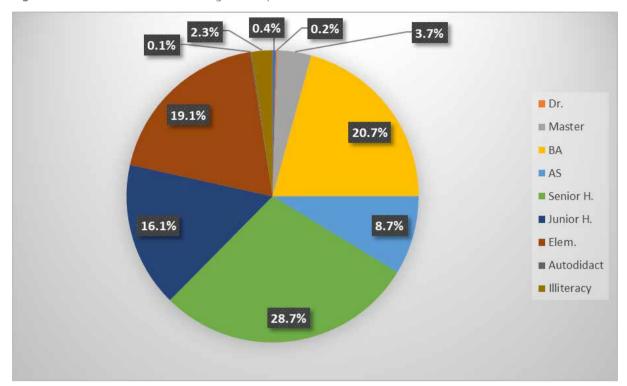


Figure 5. Educational Level of Hsin-Kang Township 2020

SOURCE: TESAS DATABASE

Taiwan's household registration system does not restrict people's freedom of movement. That means the registered population is not equal to the permanent population, especially in rural areas. Therefore, whether it is population gender or education level statistics, there is a gap with the real-time data and may lay challenges in judging, communicating, and participating in public policies.

2.2. Demographic Information of Aging Issue

First of all, by analyzing the dependency ratio, child dependency ratio, and old-age dependency ratio data, we can discover the development trend and crisis of aging and low birth rate in Hsin-Kang Township. The dependency ratio of Hsin-Kang Township has gradually dropped to around 45 within 13 years. The old-age dependency ratio has been rising since 2008, and the child dependency ratio has continued to decline since 2008.

In other words, the dependency ratio of Hsin-Kang Township has been revised down, mainly due to the low birth rate. By including the possible outbound working pressure, the situation is getting worse. It is not difficult to understand the challenges faced by the permanent population of Hsin-Kang Township in the life support network.

By analyzing the population structure of Hsin-Kang Township, the group of 15-64 years old has maintained steady of 70% and slight growth since 2008. At the same time, the increase of population over 65 years old was higher than the group of labor force population. The population under the age of 14 continues to fall, below 10% in 2020 (see Figure 7 for details). It means the working population must take the responsibility of elder caring and have to make long-term plans for themselves.

If we look at the aging index alone, Chiayi County's aging index in January 2021 has reached 227.9, the highest in Taiwan. However, for Hsin-

50 40 30 20 10 0 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2008 2009 Old age dependency ratio (%)

Figure 6. Ratio of dependency, child dependency & old-age dependency

SOURCE: TESAS DATABASE

Kang Township located in the administrative district of Chiayi County, its aging index had already exceeded 230 in 2020. The structure of the aging population brings the urgent problem of eldercare and economic revitalization to the table. To solve the above problems, the local community has engaged

in community development. Meanwhile, public agencies have proposed various policies to promote the purpose. Based on the community's shared value, people realize the importance of maintaining a support network for community life in Hsin-Kang Township.

80% 70% 60% 50% 40% 30% 20% 10% 0% 2011 2012 2014 2015 2008 2009 2010 2013 2016 2017 2018 2019 2020 ---0-14 yrs (%) ----15-64 yrs (%) over 65 yrs (%)

Figure 7. Population grouping of Hsin-Kang Township

SOURCE: TESAS DATABASE

250

200

150

100

50

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Aging Index(%)

Figure 8. Aging Index of Hsin-Kang Township

SOURCE: TESAS DATABASE

2.3. Cultural Information

Hsin-Kang Township is known as the "first village in Taiwan" based on its long history. Most residents come from Zhangzhou and Quanzhou. In times of trials and tribulation, the belief in Mazu became the spiritual support of the ancestors, bringing a sense of stability to the land reclamation. Hsin-Kang Feng Tian Temple enshrines Mazu (see the photo on the left in Figure 9 for details) and is well-known as the first temple for Mazu in Taiwan. It is also the origin of many Mazu beliefs in the Chinese world.

Facing the change of the population structure, the Mazu faith circle has carried out community development as a solution. In 1987, Mr. Chin-Huang Chen (M.D.) collaborated with local elites to set up the "Hsin-Kang Foundation of Culture & Education" in his hometown to rebuild community culture and shape community values. Mr. Chen is a pioneer of

community development in Hsin-Kang Township and a well-known community opinion leader in Taiwan.

Since 2004, the Foundation has rented out the idle space in the community and named it "Hsin-Kang Living Room" (see the photo on the right in Figure 9 for details). Catering services, sales of local agricultural products, and specialties are the primary services in "Hsin-Kang Living Room." In addition to that, the goal of the autonomous operation was achieved in 2011. It identified itself as a community-based social enterprise for the community.

Hsin-Kang Township is divided into 23 villages. Each village has its features and one community development association. For example, Bantou Village has become an essential base for the inheritance of Koji Pottery (see the photo in the upper-left corner of Figure 10). Sibei Village has become famous for lisianthus planting (see the photo in the upper-right

Figure 9. Photos of Local Landmarks. Hsin-Kang Feng Tian Temple and Hsin-Kang Living Room





corner of Figure 10 for details). Gonghou Village has a handmade soy sauce factory (see the photo in the lower-left corner of Figure 10 for details).

The development of the homestay business in Caigong Village is also quite distinctive (see the photo in the lower-right corner of Figure 10 for details). The successful introduction of these community industries has made Hsin-Kang Township more vigorous through those strategies of industry transformation and added value.

III. Hsin-Kang Township's Challenges and Opportunities

3.1. Challenges Rises During COVID-19 Pandemic

Although community development has established a service network and support system in all villages of Hsin-Kang Township, the sudden COVID-19 pandemic and various government control measures have brought more severe challenges to communi-

Figure 10. Photos of Community Features. Pottery Creation, Lisianthus Planting, Soy Sauce Factory, and Rural Homestay









ties with aging and declining birthrates.

Here are several points described as follows:

- 1. How to continue caring services for the elders living alone in the community?
- 2. How to meet the pandemic prevention needs of vulnerable families such as new migrants?
- 3. How to control the hot spots and risks of infection in the community?
- 4. How to provide life support for people during home quarantine or self-health management?
- 5. How to organize community pandemic prevention volunteers?
- 6. How to care for residents' psychological needs?
- 7. How to effectively divert primary medical care?
- 8. How to work together to notify and send the infection case?
- 9. How to provide and publicize health education information for the inferior group?

Imagine that when the government launched "the mask rationing plan" with APP pre-order system due to the imbalance between the supply and demand of masks, the elderly in the rural area immediately became vulnerable groups under the policy. Moreover, when community activities were completely shut down due to the pandemic control, the life support network in all villages of Hsin-Kang Township was suspended. The loneliness and actual needs of the elderly in the community may become victims of the pandemic control policy. These challenges derive from those pandemic measures that have caused an impact on the elderly.

3.2. Opportunities Rises During COVID-19 Pandemic

In facing the challenge of the pandemic to the community, it is necessary to bridge resources through community development. It is also helpful in creating resilient communities for pandemic prevention. This idea, led by Mr. Chen, the founder of

"Hsin-Kang Foundation of Culture and Education," advocated that a pandemic crisis can be an opportunity. Therefore, there are six directions of action recommended as below:

- Connecting community forces to promote positive action: Alliance with local forces to establish the "Hsin-Kang Pandemic Prevention Action Committee" and the "National Alliance of Pandemic Prevention in Community" in early 2020.
- Actively care for the inferior group in the community and avoid the emergence of "super spreaders": For example, elderly people with weak virus resistance, new migrants with insufficient information on pandemic prevention, and other inferior groups.
- Reflect hot spots of infection in the community and fill in the pandemic prevention gap: For example, a community network is helpful to discover many stores that disobey the prevention guidelines and run their business.
- Uphold the spirit of community, do not labeling people diagnosed and contacted with COVID-19. Make a clear statement to emphasize the importance of empathy and mutual support.
- 5. Mild patients find primary clinics and telemedicine to reduce the burden on medical centers: The ideal approach allows mild patients who are not in immediate danger of life to stay at home. Also, the primary clinician can conduct medical examinations through video call, telephone, or other means. Avoid infecting others.
- Call on community volunteers to convey correct health education concepts and calm panic:
 Many older people only speak Taiwanese, and it is not easy to grasp the information provided by the government on pandemic prevention immediately.

Figure 11. Photos of Foundation founder and a screenshot of the demonstration video, Mr. Chin-Huang Chen (M.D.)² and Demonstration video³



IV. Innovation in COVID-19 Pandemic

Until 2021, the threat and impact of the COVID-19 pandemic around the world do not decrease. Even European and American countries with more developed public health and better medical services have successively fallen into a pandemic. The implementation of social distancing, the mandatory wearing of face masks, the restriction on freedom of assembly, and even the free policy of publicly funded vaccination have failed to control the spread of the pandemic fully.

However, some communities in Taiwan have demonstrated their effectiveness of pandemic prevention due to the independent implementation of community pandemic prevention measures. For example, there are no confirmed cases in the community of Hsin-Kang Township until the end of August 2021. Those innovative ideas collected from Hsin-Kang Township are entailed below.

4.1. Innovations Overcome Challenges

In April 2020, considering the possible outbreak of community infections caused by the COVID-19 pandemic, Mr. Chen, the founder of "Hsin-Kang Foundation of Culture & Education" (see Figure 11 for details), formed a "National Alliance of Pandemic Prevention in Community" to prepare pandemic prevention for communities in advance. He also formed



a "Hsin-Kang Pandemic Prevention Action Committee" to emphasize the importance of pandemic prevention and to implement health education. Their innovative actions are listed below.

- Facebook posts to discourage Mazu Pilgrimage activity from Daijia to avoid community infection risks that may increase due to crowd gathering.
- In cooperation with "Hsin-Kang Elementary School," to publish the handwashing demonstration video entitled "Hsin-Kang In, Virus Out," to teach senior Taiwanese the importance of health education and practice.
- 3. In cooperation with the "Fuyuan Service Association" in Chiayi County, training for pandemic volunteers and deployment for home visiting.
- Use social media such as LINE to perform pandemic prevention contact to avoid clustering risks.
- Community organizations meet regularly and actively maintain contact with local health bureaus.

² The photo of Mr. Chin-Huang Chen (M.D.), 2021.08.15 retrieved from "FB of Mr. Chin-Huang Chen (M.D.)," the webpage address is https://www.facebook.com/chc.dr.

³ Handwashing demonstration video entitled "Hsin-Kang In, Virus Out," 2021.08.15 retrieved from the website of "Hsin-Kang Foundation of Culture & Education."

In addition, it also cooperated with "Sinyi Realty Inc.", a well-known housing sales company in Taiwan, to set up the "Mutual Aid Network of Community Symbiosis Action". It also held the campaign entitled "Whole Taiwan as One Family, 100 proposals for community symbiosis action in the pandemic". The activity mentioned above provides a reward of 10,000 NTD per case to encourage individuals or groups to develop innovative ideas to prevent the pandemic's impact and maintain the community's resilience.

4.2. Operation of "National Alliance of Pandemic Prevention in Community"

Among the many innovations mentioned above, the "National Alliance of Pandemic Prevention in Community" is the most important. Below is a detailed description of its initiation and operation experience.

- The alliance integrates local resources network according to needs: The alliance was mainly initiated by "Hsin-Kang Foundation of Culture & Education" and "Fuyuan Service Association" in Chiayi County and co-sponsored by Hsin-Kang Township Office, Hsin-Kang Township Public Health Center, Village Heads, Village Clerks, Farmers Association, Schools at all levels in the Township, local religious groups, primary care physicians, community pharmacists, home nurses, caregivers, community college, community development associations, and other local non-governmental organizations.
- Uphold the concept of community life as a whole: Strengthen caring for people during home quarantine or self-health management in the community, and deepen the sense of mutual benefit and shared prosperity in the community.
- 3. Prepare the resources for pandemic prevention in the community: (1) To diagnose possible infec-

- tion cases in the community as soon as possible; (2) establish medical service SOPs for effective triage and transfer in the community; and (3) continue to implement practical exercises under the premise of complying with the directions made by Central Pandemic Command Center (CECC).
- Use social media for real-time communication:
 Mainly use LINE or other forms to maintain contact and establish an effective community notification system.
- Make good use of community resources: Discover loopholes or difficulties in community pandemic prevention as early as possible, and engage everyone to solve them promptly.
- Publish diverse health education media materials: In response to the pandemic prevention needs of different educational backgrounds, different ages, and different stages of the pandemic, continue to introduce or develop health education media.
- Extensive recruitment of community pandemic prevention volunteers to make up for the lack of human resources in the public sector.

V. Summary and Further Studies

5.1. Summary of the Case

At the time the COVID-19 pandemic has raged, the 23 communities located in Hsin-Kang Township have demonstrated community resilience and become outstanding pandemic prevention communities. It is mainly due to the long-term promotion of community development and the establishment of community awareness led by the "Hsin-Kang Foundation of Culture & Education." Moreover, the excellent use of the accumulated community network and trust is also a critical reason. Based on the govern-

mental regime, local communities have preemptive preparedness and community norms for pandemic prevention and control.

The 23 communities in Hsin-Kang Township are typical ones with a high dependency ratio, a high oldage dependency ratio, and a high aging index. Those conditions make its 23 communities easy to become a high-risk community. However, the cumulative results of community development and the vision of local leaders have contributed to the effectiveness of pandemic prevention. Taking the practical experiences of the "National Alliance of Pandemic Prevention in Community" as evidence, the conclusion and the statements mentioned above can be confirmed. Those experiences can also be used as a reference for the local or foreign self-governing body and communities in similar situations.

5.2. Further Studies

It is glad to see the results of the pandemic prevention led by the "Hsin-Kang Foundation of Culture & Education". In addition to summarizing relevant preemptive preparedness for pandemic governance and its effectiveness, some institutional structure problems are identified below. The local self-governing body or communities at home and abroad are vital factors to innovation diffusion of successful experiences in Hsin-Kang Township.

First of all, government agencies should expand their vision and scope of preparation for disaster governance. In the past, public agencies emphasized natural disaster management and existing understandings, which are not enough to cope with the pandemic disaster caused by the virus. Although it is necessary to emphasize the concentration of power and more strict control during the pandemic prevention period, government agencies should not ignore the capacity of pandemic prevention in civil society and local communities needs.

Second, the civil society has no enough experience of pandemic disaster governance as well as government agencies. Civil society organizations (CSOs) sometimes even step back due to a partial understanding of the pandemic. The introduced case in this article is a primary care physician with a long-term commitment to Hsin-Kang community development. To him, there is no problem with the interpretation of pandemic information. On the contrary, people are even unable to tell disinformation and to explain misinformation. Therefore CSOs need to overcome the problem of infodemic in order to become a qualified partner in pandemic governance.

Finally, many communities have neglected the incubation and succession of community leaders for a long time. Many communities even ignored the success of the "Hsin-Kang Foundation of Culture & Education" and took it as an incidental case because most communities always lack experienced, mature leaders with comprehensive communication skills.

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Panggungharjo Village: Innovation through Digitalization during COVID-19 Pandemic

Theresia Gunawan, Pius Sugeng Prasetyo

I. Profile of Panggungharjo Village

Panggungharjo Village is a combination of three villages, namely Cabeyan Village, Prancak Village, and Krapyak Village. The existence of Panggungharjo Village cannot be separated from the existence of "Panggung Krapyak" or by the surrounding community referred to as "Kandang Menjangan", which is in Krapyak Kulon Hamlet, Panggungharjo Village. It is known that the Krapyak Stage is one of the elements of the 'imaginary axis' that divides the city of Yogyakarta, namely the line of Mount Merapi - Tugu Pal Putih - Kraton Ngayogyokarto Hadiningrat - Panggung Krapyak and Parangkusumo, which are on the south coast.

Meanwhile, based on historical evidence, Panggungharjo Village itself was formed based on edicts numbers 7, 14, 15, 16, 17, and 18 of the Yogyakarta monarchy in 1946, which governed the village ad-

ministration at that time. From this announcement, the anniversary date of Panggungharjo Village was set on December 24, 1946. After the announcement was made, it was then reaffirmed with Decree No. 5 of 1948 by the Government of the Special Region of the Republic of Indonesia, Yogyakarta concerning changes in village areas and their names.

Figure 1. Krapyak Stage (Ind: *Panggung Krapyak/ Kandang Menjangan*)



SOURCE: MINISTRY OF EDUCATION AND CULTURE (2019

In one of the contents of the edict, it was stated that there was a merger of three sub-districts, namely Cabeyan, Prancak, and Krapyak villages into a new village called Panggungharjo Village. Meanwhile, Hardjo Sumarto himself was appointed as the first Head of Panggungharjo Village through the Decree of the Yogyakarta Regional Government Council Number 148/D. Pem.D/OP dated September 23. 1947.

Based on historical facts and evidence, the cultural roots in Panggungharjo Village have grown and developed, as they are related to and influenced by the community and cultural interventions that developed during its time, namely:

- In the 9th-10th centuries, Panggungharjo Village was an agricultural area, evidenced by the existence of the Yoni Karang Gede site in the Ngireng-Ireng Hamlet. From this agrarian culture emerged cultures, such as Gejok Lesung, Thek-thek/Kothek-an, Merti Dusun ceremony, Wiwitan ceremony, Tingkep Tandur, and other cultures, whose traits are a tribute to nature, growing food so that it is beneficial for the sustainability of human life.
- 2. In the 16th century, the West of Krapyak and Glugo area were hunting and tourism areas (Prince Sedo Krapyak 1613), while in the 17th century these areas were used as a sporting place for deer/deer archery and as a place of defense (Sultan HB I Stage Krapyak 1760). The culture was brought forth from the intervention of the existence of the Mataram Palace as a cultural center so as to foster a noble culture, such as Panembromo, Karawitan, Mocopat, Wayang, Ketoprak, Sungging Tatah Crafts, Blangkon Crafts, Lurik Weaving Crafts, Batik, Gamelan Industry, and Classical Dances.
- In 1911 in the West of Krapyak area, the Al Munawir Islamic Boarding School was established, and developed cultures, such as Sholawatan, Dz-

- ibaan, Qosidah, Hadroh, Rodad, Marawis, as well as cultures attached to worship activities, such as *Syuran* (commemoration of 1 Muharram), *Mauludan* (commemoration of the Birthday of the Prophet Muhammad SAW), *Rejeban* (commemoration of Isro' Mi'roj), *Ruwahan/Nyadran* (sending prayers for ancestors ahead of Ramadan), *Selikuran* (Nuzulul Qur'an).
- 4. Around 1900-1930 a culture developed because of the need to socialize in the community, thus various kinds of children's games/toys were developed, such as *Gobak Sodor, Benthik, Nekeran, Umbul, Ulur*/kites, *Wil-wo*, and etc. Even in Pandes village, a community called "Kampung Dolanan" has developed, which produces traditional children's games, such as *Othok-Othok, Kitiran, Angkrek, Keseran*, and *Puppet* Paper.
- In 1980 in the village of Panggungharjo which is a sub-urban area, modern urban culture began to develop and was heavily influenced by the young generation, therefore the arts of Band, Drumband, *Takbiran* Carnival, Modern Dances, *Campur Sari*, Outbound, and Playstation/Game Rental grew.

Figure 2. The Map of Panggungharjo Village



SOURCE: GOOGLE MAP (2021)

II. Vision and Mission

Vision:

Organizing a clean, transparent, and responsible government to create a democratic, independent,

and prosperous Panggungharjo Village community as well as environmental awareness.

The vision implies that the Panggungharjo Village government wishes to realize an independent and prosperous life in a democratic way by implementing a clean, transparent, and responsible government. The meaning of each word contained in the vision is as follows:

- 1. Clean, in the sense that government is run based on sincere and holy intentions and is based on a high spirit of devotion.
- 2. **Transparent**, in the sense that every decision taken can be accounted for in an open and accessible manner to the public.
- Responsible, in the sense that the government is obliged to bear everything and accept its burden due to the attitude and actions of themselves or other parties. If something happens, you can be sued and blamed.
- 4. Democratic, which means that there is freedom of opinion, differing opinions, and accepting the opinions of others. However, if it has become a decision, it must be carried out together with a full sense of responsibility.
- Independent, which means that the conditions or circumstances of the Panggungharjo community with local initiatives and potential are able to meet their daily needs.
- 6. Prosperous, which means that the basic needs of the people of Panggungharjo Village have been fulfilled physically and mentally. These basic needs are in the form of adequacy and quality of food, clothing, housing, health, education, employment, and other basic needs such as a clean, safe, and comfortable environment, as well as the fulfillment of human rights and participation and the realization of a community of faith and piety to God Almighty.
- Environmental awareness, which means that environmental sustainability is used as the spirit of all development activities.

Mission:

The mission of the Panggungharjo Village government is also a statement about the operational objectives of the village government which are realized in activities or services and is an elaboration of the vision that has been set. The vision statement reflects everything that will be carried out to achieve the desired future picture. The mission of Panggungharjo Village is as follows:

- 1. Realizing professional services through improving responsive and transparent village governance.
- 2. Realizing a dynamic and peaceful social life.
- 3. Increasing the potential and carrying capacity of the environment to create business opportunities.
- 4. Improving community welfare through participatory green development.
- 5. Improve and expand the network of government and non-government cooperation.

Values:

- Participatory (involvement): Every member of the Panggungharjo community has the right to participate in the context of development with the principles of, by, and for the community. Therefore, every community development process must be involved starting from planning through to implementation of supervision to maintenance.
- 2. Transparent (openness): The open nature of the Panggungharjo Village government with reasonable limits in order to increase public trust.
- 3. Democratic: People are given the freedom to express opinions and accept the opinions of others.
- 4. Effective and Efficient: Prioritizing optimal results with relatively few sacrifices (cost and time), so that they are effective and efficient.
- Cultured: Every development step is in line with the customs and culture that develops in the community, thus the implementation of village government always upholds noble culture and character.

III. The Pandemic Impact: Economic, Political, and Social Perspectives

The COVID-19 pandemic not only has an impact on human health, but also affects people's lifestyles. People's lives before COVID-19, which previously enjoyed high mobility and frequent face-to-face meetings, have immediately changed because of the Coronavirus. The Coronavirus has stopped several business sectors and encouraged people to become a work-from-home community. As one of the impacts, several industries that have been severely affected by COVID-19 have been forced to lay off workers and cut their employees' salaries. Villagers who previously migrated to work in cities, had to quit their jobs because many industries experienced a decline and went bankrupt.

With many villagers' returning from living/working in the cities, the epicenter of the COVID-19 disease switched to the village. People who migrated to the city and then returned to the village cannot be blamed, because the village is the place of origin which will certainly accept them when the city is no longer a place to earn income. Villages that have been a source of logistics and food for urban people and villagers themselves will be threatened. If this pandemic spreads to villages, especially villages that have been supporting food supply, it will lead to a widespread food crisis. Furthermore, if the prices of basic food supply soar, it will lead to the decreasing of the family's economic buying power.

In Panggungharjo Village itself, some people have been economically affected, such as food sellers who usually sell at schools or Islamic boarding schools, because the boardings and schools are closed, and automatically there are no buyers. In a wider scope, such as in Jogja, there have been thousands of people who are affected, among them are the workers in the tourism industry, such as souvenir traders who open stalls, tour guides, pedicab

drivers, who usually take the tourists to souvenir shops. They are no longer able to work and earn a living.

Under these circumstances, what can be done is to identify the community around you by type of occupation to find out who is affected and simultaneously find out whether they also have agricultural land. Farmers, especially those who raise livestock, are a group that is safe from food insecurity because they have rice and livestock reserves.

The impact of the spread of COVID-19 in the villages has also disrupted social institutions that have been the source of local wisdom for villagers. Psychologically, the community in the village is experiencing a social crisis with the emergence of social insecurity and stagnation of social institutions because of the loss of communal communication methods due to restrictions in public activities. With the COVID-19 pandemic situation, residents are no longer able to communicate face-to-face with social institutions. Currently, villagers also have to perform social and physical distancing.

In this situation, the state as the main actor must also be able to mobilize other actors, such as the private sector and the community to handle disaster emergencies. At the grassroots level, the presence of the state is represented by the village government. The village government is closest at hand to be able to reach and help the community in disaster emergencies. The village government can be the spearhead and the main player in developing action plans to do extraordinary things in an emergency.

The village government must act as the most responsive party because of its flexibility in leveraging relative resources, namely the ease in speed of decision making because it does not require time for discussion with many parties and does not need to wait for capital decisions (economic interests). The village and its village government, which are now equipped with more autonomous financial re-

sources (village funds) can utilize all their power to deal with disasters with all of their action plans.

IV. The Handling Strategy of COVID-19 in Panggungharjo Village

Responding to SARS CoV-2 that spread to Panggungharjo Village, the Village Head of Panggungharjo and the village officials have worked hard to contain the spread of the virus in order to control the fluctuation of COVID-19 cases and take measures to prevent the spread of the disease. The role played by the village government in responding to everything relating to the issue of the COVID-19 pandemic certainly cannot be done alone.

The social power represented by the presence of the state requires encouragement from other actors, such as related agencies at the top level, the private sector, and certainly the active participation of the people in Panggungharjo Village to solve the COVID-19 problem that currently exists. Panggungharjo Village, with this framework, has been building a COVID-19 response initiation model at the village level, village officials, and the community in Panggungharjo village. This model puts the village government at the forefront, starting from making program frameworks to action plans in response to the COVID-19 pandemic in Panggungharjo Village.

The existence of COVID-19 as a pandemic has in fact changed social processes. This condition forces people to minimize physical contact, both individually and communally face-to-face. Thus, Panggungharjo Village, which is usually busy with face-to-face interactions between residents, in the presence of COVID-19 must also change the models of interaction and social institutions that exist in the community. Using software platforms or applications has been the main choice. Panggungharjo Village has taken the initiative to provide services from the state for handling COVID-19 by prioritizing the use

of technology through two main platforms, namely the Report Platform (*Lapor*) and the Support Platform (*Dukung*).

The Report Platform is an application used to identify objective conditions faced by the residents in Panggungharjo Village by maximizing the involvement and active participation of the community using technology. The report platform in Panggungharjo Village aims to overcome the immediacy of impacts related to medical emergencies, economic mitigation, and social mitigation based on data reports from the residents, which certainly requires a quick response during an unpredictable time of pandemic.

With the Support Platform, the Panggunghar-jo village government attempts to mobilize all the resources owned by the village to respond to the COVID-19 disaster emergency. This platform aims to solve the problems and impacts faced by the villagers of Panggungharjo. This platform focuses on the village government's response efforts by mobilizing the support capacity of volunteers and donations from the community by delivering physical assistance (basic needs) or money by giving donations. This platform also provides assistance from medical professionals (doctors and nurses).

With the reporting platform and support platform, the residents and the government of Panggungharjo village will find a new formulation to form a new order by finding, responding to, and solving problems faced in this pandemic. Hence, new responsive social institutions are built, based on real conditions and the ability to handle pandemic problems based on community needs.

Figure 3. The Reporting and Supporting Platform



SOURCE: INFORMATION DATA TEAM PTC-19.2 (2020)

Figure 4. The Reporting Application



SOURCE: INFORMATION DATA TEAM PTC-19.2 (2020)

V. The Role of Communication, Data, and Information

Nowadays many jobs will be completed quickly when we take advantage of technology. In a pandemic situation, technology will also speed up the process of sending information, communication, data, documents, letters or files, as well as goods (Astini, 2020). Communication and community empowerment are important and inseparable components in helping prevent the infodemic (spreading false information/hoaxes.This then builds public trust in government readiness and response, therefore people can receive information properly and follow government recommendations.

These things can minimize misunderstandings and manage rumors/hoaxes regarding current health conditions and risks. On the other hand, this effort is also very important for surveillance, case

reporting, contact tracing, sick care, and clinical care, as well as gathering local community support for logistical and operational needs.

The data are needed for initial identification of the potential impacts that may be experienced by villagers, to assess both clinical impact in the form of infected residents and non-clinical impact in the form of potential loss of income for residents during this crisis. The role of data is very crucial, both in prevention, handling, and mitigation by filling out forms submitted via WhatsApp Business.

In addition to actively encouraging residents to fill out data collection forms, the village government also seeks the best steps to ensure the safety and survival of its citizens, although its efficacy really depends on the quality of the data collected from the forms that have been distributed.

In addition, this data is also needed to identify the social capital owned by the residents of Panggungharjo Village. It is then expected that the Panggungharjo Village Government can encourage the recovery of the culture of mutual assistance to jointly overcome this crisis. The village head stressed that data was very important: "Don't forget to fill in your data, for the survival of your life, your family, and your future!" The communities are involved, the data are accurate, the village is sovereign.

The village assures that residents have received a lot of information from various sources. However, from all sources of information, none of these sources of information provides a channel for villagers to report what the residents of Panggungharjo Village are dealing with.

Thus, the platform of C-19 response at the WhatsApp Groups (WAG) is dedicated to accommodating all village residents' complaints, hopes or concerns, needs, and problems faced by the residents. The submission of information is only limited to good experiences on the initiatives of the

residents in Panggungharjo Village, related to how they build a social system to deal with this crisis together.

Understanding the obstacles faced by using the digital applications in this mitigation activity is paramount, so the platform is made as easy and simple as possible so that those who do not have access to technology can still benefit from the platform.

As a form of consistency in educating residents, the Panggungharjo Village Government launched a web-based application to monitor the health conditions of its residents. Unlike the inauguration or launch of village programs or activities which are usually accompanied by ceremonial events, this time the launch was carried out by the Village Head via the social media platform Facebook and WhatsApp Groups. The Head of Panggungharjo Village, Wahyudi Anggoro Hadi, in a written message to the residents said, "Currently residents must conduct social and physical distancing. Therefore, the launching is via social media platforms and villager WhatsApp Groups."

VI. Public Trust to the Village Government

Combining IT systems to facilitate monitoring and data collection is important. But no less important is how the process of developing this emergency response system becomes a unified movement, which allows all village components to be involved in it. So, what is needed is strong leadership, namely assertive leadership, which can inflame social solidarity, and is trusted by its citizens. This can only be obtained if the village government is open-minded about the condition of the infected community and the number of victims. As such, the village head takes full control of the control system and operations in the village in which an environment of openness and information are important prerequisites for building trust and citizen involvement.

Mutual trust is needed to overcome the COVID-19 disaster. Mutual trust is required both between communities and with the village government. The community must believe in the village government's COVID-19 disaster management

Figure 5. Panggungharjo Donation Recapitulation. The form of transparency of information that is shared with the WhatsApp Groups (WAG) of Panggungharjo Villagers.

No	Nama	Jumla	h	Alamat
1	Basuki			Cabeyan, Panggungharjo
2		Rp		, , , , ,
2	Heri Winarto	Rp		Krapyak Kulon, Panggungharjo
3	Naura Fatma	Rp	50.000,00	Kweni, Panggungharjo
4	Asih Nur Candra	Rp	100.000,00	Palemsewu, Panggungharjo
5	Dwihening Jayanti	Rp	200.000,00	
6	Eni Kartika S	Rp	200.000,00	Krapyak Kulon, Panggungharjo
7	Hamba Allah	Rp	1000.000,00	
8	Ening Yuli Soleh Astuti	Rp	300.000,00	Cabeyan, Panggungharjo
9	BPD Desa Panggungharjo	Rp	3.500.000,00	
10	Nanang	Rp	100.000,00	Sawit, Panggungharjo
11	Ahmad Syfa	Rp	100.000,00	Krapyak Kulon, Panggungharjo
12	Pemerintah Desa Panggungharjo	Rp	48.977.684,00	
13	Rustamaji	Rp	10.000.000,00	Palemsewu, Panggungharjo
14	Rumekso	Rp	400.000,00	Sawit, Panggungharjo
15	Anis Budi Kartini	Rp	100.000,00	Krapyak Wetan, Panggungharjo
16	Ella Yuwanti	Rp	100.000,00	
	Total	Rp	65.427.684,00	

SOURCE: INFORMATION DATA TEAM PTC-19.2 (2020)

Figure 6. Assistance Management Report. The form of information transparency that is shared to the villagers through the WhatsApp Groups (WAG).

Laporan Pengelolaan Bantuan Panggung Tanggap Covid - 19 Rabu, 1 April 2020 20.00 WIB						
Sumber Donasi Uang						
Donasi Warga	:	Rp	12,950,000.00			
Donasi Non-Warga	: _	Rp	52,477,684.00			
Jumlah Donasi Uang	:	Rp	65,427,684.00			
Donasi Barang						
Minyak Goreng	:	9	Liter			
Masker	:	130	Buah			
Clorin	:	1	Kg			

SOURCE: INFORMATION DATA TEAM PTC-19.2 (2020)

policy scheme, while still thinking critically and to trust when asked to stay at home, work at home, eliminate crowded activities, not crowd, and so on to prevent the unmitigated spread of the virus.

Without the presence of public trust, the government's efforts to overcome the COVID-19 disaster will be in vain. On the other hand, the government must believe that the people will not remain silent. The community cooperates, either by simply following the government's advice, or helping to overcome the shortage of equipment and needs that the government has not managed to fulfill. For example, the need for medical personnel, masks, hand sanitizers, food ingredients, and others.

The government should maintain this trust by optimizing efforts to overcome the COVID-19 disaster thereby prioritizing public interest over the interests of a handful of elites. Trust will foster solidarity, both individually and collectively. Solidarity

is social energy to deal with the COVID-19 disaster: solidarity between citizens can build strength at the community level while political solidarity can build political power and policies at the state level.

In a disaster situation, removing the barriers of power and opposition is necessary because solidarity is important. To maintain this trust, unveiling information is an important key to build the involvement of residents and village communities to jointly respond to disasters. That is what must be developed in the village. Transparency regarding the number of residents who are indicated to be positive of COVID-19, or a restill being monitored, is important. Who and where people experience symptoms is also important information to be communicated to the village public. The aim is absolutely the readiness and vigilance of the residents to be continuously maintained and improved.

VII. Family Education

One of the things that the village must pay attention to is the COVID-19 Response Platform, which provides family educational content to assist families in doing Work from Home (WFH) or self-quarantine. The educational content needed is related to tips and tricks for parents in terms of assisting children to study at home, family health, family/child psychology, and relevant to all who experience changes during self-quarantine.

Content about family education can target productive activities that can be carried out at home during the self-quarantine process, such as knitting and handicrafts that can be done with family at home, cooking healthy recipes, tips for managing family finances during a crisis, and utilizing a yard. Giving understanding to families, especially children during the COVID-19 pandemic, is certainly not easy, especially at this time when schools are closed. Basically, school closures are also an opportunity to foster better relationships with our children and youth. Time together is fun. It also makes children feel loved, safe, and shows that they are important during a pandemic situation.

To support these activities, the Family Education Team as part of the COVID-19 Response Platform produces positive content, which will be published periodically and distributed to all telephone numbers of villagers. The family education team is one of the important pillars to accompany residents in their hamlets, who are experiencing regional quarantine.

VIII. Utilization of House Yard to Plant Food Reserves

Another step taken is that residents, especially those who still have yards, start using even the narrowest part of their yard to plant food reserves and vegetables, which can be consumed in the next 20-30 days. Farmer groups in Panggungharjo Village are

assigned to carry out an inventory of village lands that can be used for vegetable cultivation. The Panggungharjo Village government will also gather farmer groups in their village. This is related to mitigation efforts for the possibility of food scarcity. The reason is, in a situation like this, there may be money but the goods needed are not available.

This meeting with farmer groups aims to calculate the food reserves they have, including the potential for harvesting from the previous month up to the following month. Each farmer group was asked to submit data regarding when, how much they harvest and who does this. Referring to the area, Panggungharjo Village has a rice field area of about 120 hectares. Some are just planted, but some are ready to harvest in the next one or two weeks.

When basic needs are available, both from aid and reserves, the village government then encourages the community to plant various types of vegetables in their yards. The selected vegetables

Figure 7. 1st Place in National Village Food Security Competition in 2021



SOURCE: BPOM (2021)

Figure 8. Residents Prepare Media to Grow Vegetables during the COVID-19



SOURCE: INFORMATION DATA TEAM PTC-19.2 (2020)

are those whose harvest period is not more than a month, for example spinach, mustard greens, water spinach, lemongrass, turmeric, ginger, papaya, cassava, basil, etc. The harvest will be distributed to residents, as one of the efforts of food security.

The government really appreciates the movement of farming in each inch of land that they have, as the food availability in Indonesia is increasingly vulnerable due to the increasing amount of agricultural land that is converted into housing, malls, and factories (Prasetyo et al, 2019). Other problems related to food availability in COVID-19 are the access and affordability to good and healthy food, which could drive food scarcity in villages and cities. Thus, the initiative of food security in the village has enabled Panggungharjo Village to be awarded 1st Place in the National Village Food Security Competition in 2021 from The Indonesian Food and Drug Authority.

Through the COVID-19 Response Platform (PTC-19), the village government has made efforts to mitigate the economic impact of the COVID-19 outbreak

on the community, especially related to the loss of livelihood due to loss of income. This is especially relevant for those residents whose livelihood relies on small business activities, such as stalls, peddlers, tailors, shoe repairman, barbers, laundry service businesses, online motorcycle drivers, as well as some residents who have lost their source of livelihood due to the loss of a job. Those whose livelihood depends on manual work, either as farm laborers, factory workers, daily freelancers, masons, temporary employees, or rental car drivers, are temporarily laid off or in the process of losing jobs.

IX. Handling the Emergence of Vulnerabilities

There are two community groups, which we later refer to as Vulnerable Groups. The economic impact of the COVID-19 outbreak for this vulnerable group can be grouped into two, namely the emergence of food insecurity and the reduction of employment opportunities, thereby increasing the unemployment

95 -Tidak memiliki pekerjaan, atau memiliki pekerjaan yang terdampak langsung COVID-19. Tidak memiliki penghasilan atau memiliki **SANGAN RENTAN** penghasilan sebanyak-banyaknya Rp. 1.000.000,- per bulan, dan tidak memiliki jaminan sosial apapun. 56 Memiliki pekerjaan yang terdampak COVID-19 atau memiliki penghasilan sebanyak-banyaknya Rp 2.000.000/bulan, memiliki jamsos dan/atau BPJS mandiri/ketenagakerjaan, memiliki cadangan ekonomi **RENTAN** baik berupa barang dan/atau dengan nilai diakhir Maret setara dengan Rp. 2,5 - Rp. 5 juta. 36 Memiliki pekerjaan tetap dan atau memiliki penghasilan sekurangkurangnya Rp 2.000.000,- per bulan. Memiliki asuransi BPJS mandiri atau **CUKUP RENTAN** ketenagakerjaan, memiliki cadangan ekonomi baik berupa barang dan / atau dengan nilai di akhir Maret setara atau lebih dari Rp. 5 juta. 17 **TIDAK MEMENUHI KRITERIA TIDAK RENTAN**

Figure 9. Classification of Family Economic Vulnerability

SOURCE: INFORMATION DATA TEAM PTC-19.2 (2020)

rate. The economic mitigation platform carried out by the village government through the form at http://s.id/mitigasiekonomi is an effort by the village government to map the distribution of vulnerable groups as well as to develop a priority scale based on the level of vulnerability. This is conducted to ensure that the assistance that will be delivered later is in accordance with the needs and right on target.

Explanation Figure 9:

- Very vulnerable groups that do not receive the Prosperous Family Program and/or Non-Cash Government Assistance will receive 5 packages of assistance starting in the first week of April.
- 2. Very vulnerable groups that receive the Prosperous Family Program and/or Non-Cash Government Assistance will receive 3 packages of assistance starting in the first week of April.
- Vulnerable groups that do not receive the Prosperous Family Program and/or Non-Cash Government Assistance will receive 4 packages of assistance starting in the second week of April.
- 4. Vulnerable groups that receive the Prosperous Family Program and/or Non-Cash Government Assistance will receive 2 packages of assistance starting in the fourth week of April.
- Fairly vulnerable groups that do not receive the Prosperous Family Program and/or Non-Cash Government Assistance will receive 2 packages of assistance starting in the fourth week of April.
- Fairly vulnerable groups that receive the Prosperous Family Program and/or Non-Cash Government Assistance will receive 1 package of assistance starting in the fourth week of April.

X. Local Wisdom and Dealing with COVID-19

Mutual assistance is a deep-rooted social capital, the ancestral heritage of the Indonesian people. The participation of individuals and groups is needed to cope with disasters. Cooperation is also needed from business actors not to take advantage of the situation by raising prices unreasonably and hoarding goods. The business world should immediately respond by allocating CSR funds for COVID-19 disaster management. In such conditions, everyone can become victims. If the business world does not want to take part, it will definitely be disrupted in the future because the business world is related to human resources and markets. Both are driven by humans. And, the COVID-19 outbreak is certainly targeting humans, anyone, and anywhere.

Mutual trust is required to overcome the COVID-19 disaster. Mutual trust is needed both between communities and policy makers. The public must believe in the government's policy scheme on COVID-19 disaster management, while still thinking critically. To trust when asked to stay at home, work at home, eliminate crowded activities, not crowd, and so on to prevent the massive spread of the virus. Vice Versa, the government must believe that the people will not remain silent.

The community will help, either by just following the government's advice, or helping to overcome the shortage of equipment and needs that the government has not managed to fulfill. For example, the need for medical personnel, masks, hand sanitizers, food ingredients, and others. The government should maintain this trust by optimizing efforts to deal with the COVID-19 disaster and prioritizing public interest over the interests of a handful of elites.

Trust will foster solidarity, both individually and collectively. Solidarity is social energy to deal with the COVID-19 disaster. Solidarity between citizens can build strength at the community level, while political solidarity can build political power and policies at the state level. In a disaster situation, removing the barriers between power and opposition: national solidarity is more important.

Local wisdom that can support the strength of Panggungharjo Village is the continued revival of the continuous responsibility movement. The village and the villagers started experimenting again on a small scale, with the "tanggung renteng" (joint responsibility) program. This program is a kind of social laboratory that attempts to overcome the impact of COVID-19 from the economic aspect.

In the context of this "tanggung renteng", it is necessary to mobilize all existing groups such as State Civil Apparatus, Indonesian Army, Indonesian Police, employees of State-Owned Enterprises, entrepreneurs, and permanent employees to combine their financial strength, or it could be by collecting rice, eggs, oil, and other basic needs. This condition is a time where we must be together, support each other, and strengthen each other. We must be upright in one command, one line. Despite the limitations, the village government is very serious in trying to meet all the needs of the residents.

XI. Digital Innovation: Application-Based "Village Market"

Panggungharjo Village as a creative community does not remain silent in facing the COVID-19 pandemic. To maintain the survival of the villagers, innovative steps are taken by building a community based on digital technology or the smart community. A smart community is a system where people and organisations use IT to enhance the way that they conduct their everyday business. This enhancement can lead to advantages, such as, new revenue streams or attaining new knowledge that can be used to improve the efficiency of business functions. (Jackie Phahlamohlaka, Zama Dlamini, Thami Mnisi, Thulani Mashiane, and Linda Malinga, 2014).

The COVID-19 pandemic has pushed the improvement of many technological advances and has changed many things, one of which is that e-com-

merce technology is becoming increasingly popular. Even small businesses are forced to be more technology literate in the digital world, so that businesses can continue to run even during the pandemic (Ayu, 2020). Online shopping as a new lifestyle is no stranger to the COVID-19 pandemic. The emergence of various e-commerce platforms in Indonesian society has become a new alternative that facilitates people's shopping behaviour patterns, which is confirmed by many survey results which conclude that people have switched from shopping conventionally or face-to-face with sellers, to shopping online through their smartphones (Alfrianto and Irwansyah, 2020).

Agile in seeing business trends and opportunities, the COVID-19 pandemic time for Panggungharjo Village is not only seen as a burden of suffering but as a challenge to be creative and innovative to overcome problems and even make a leap of progress that could benefit the villagers and increase welfare. The innovation step taken is to utilize digital technology by developing the "Pasar Desa" (Village Market) platform.

The existence of the "Pasar Desa" (Village Market) is an alternative during the COVID-19 outbreak, considering that crowds are limited to reduce the risk of COVID-19 transmission. Starting from an emergency response effort to the non-clinical (economic) impact of the COVID-19 attack, the village market platform (https://panggungharjo.desa.id/pasardesa/) is a solution that revives local wisdom (karangkitri) to meet the food needs (consumption) of the residents in times of disaster.

Thanks to this platform, the village survives in times of disaster. The pasardesa.id platform is a village-owned market platform to address the consumption needs of its residents. The village market platform is proof that the village is able to overcome its own problems. The village market platform has the tagline: "innovation", that the government and

Figure 10. The Growth of E-commerce in COVID-19



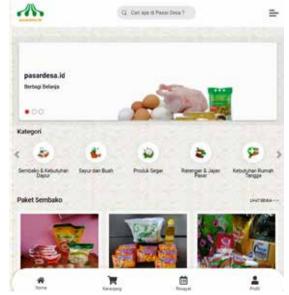


SOURCE: SIRCLO INSIGHT (2020)

village residents always work and develop to answer existing challenges; "collaboration" means mutual assistance is the key to the villagers' movement and "economic solidarity" which means that the economy is developed for all levels of society.

The village market is built to provide the daily basic needs of the villagers. Buyers only need to access the pasardesa.id and order through the shopping basket or admin contact. Then there will be volunteers who deliver the ordered goods. To ensure their health, the volunteers are equipped with special protocols to deliver the residents' food ingredients.

Figure 11. Pasar Desa Application



SOURCE: PURBA (2020)XII. KEY TO SUCCESS: LEADERSHIP AND TECHNOLOGY

XII. Key to Success: Leadership and Technology

The leadership of the village head in a pandemic condition tends to be firm and even has to be fierce to make residents not to fuss and obey existing protocols. In this condition, in a joking tone, the villagers of Panggungharjo said that the Lurah of Panggungharjo is being fierce.

The success of Panggungharjo Village in dealing with the pandemic period is briefly determined by the leadership factor and its ability to utilize tech-

Figure 12. Lurah/Chief of Panggungharjo Village



SOURCE: DESA PANGGUNGHARJO.DESA.ID (2021)

nology. Strong and committed leadership to protect and ensure the villagers prosper is a guarantee in providing a sense of security both physically and mentally, therefore it has implications for strengthening "public trust" in the village government, especially the village head. The position is clear that the village government must be the main actor who ensures that every resident is safe physically and mentally and forms public trust, not only for villagers but also the general public.

In addition to the strong leadership that makes the village the front line in handling COVID-19, the Panggungharjo Village has used technology as a means to carry out economic activities to meet the needs of the villagers, while many other areas close themselves to migrants/homecomers (who are more appropriately called refugees). Then when the city no longer presents a vibrant income, with open arms the village government welcomes those who want to return home to their villages. Not only homecomers, but the residents in the village are also monitored for all health conditions on a daily basis to reduce the transmission of COVID-19 in the village.

Panggungharjo Village utilizes technology as a strategy to bridge changes in social institutions due to social distancing. This technology is maximized even to monitor the movement of residents and the condition of residents. The method is that the village government positions its citizens as active data centers where they are invited to see, observe, listen, and pay close attention not only to the situation of themselves and their families but also their neighbors and the community where they live. They take care of each other, watch out for each other and remind each other if someone is "naughty" (stubborn). Mutual assistance may indeed be ingrained in the village, as this spirit provides help while many people save themselves.

The village government has transformed the value of mutual assistance in strategic action plans. The

question of economic impact is answered by utilizing all village capacities and community volunteerism. The economic and social impacts are largely bridged with continuous responsibilities, including those who have more helping those who have less in the village.

The village market has been developed, as the concept of food self-sufficiency was re-invigorated, where there was not an inch of land in the village that could not be utilized to provide food to those who stepped on the land. The food barn began to be filled with an inventory of village lands used as rice fields and food fields. With a total of 120 hectares of land, Panggungharjo Village seeks to meet the needs of its residents who are being hit economically due to the COVID-19 pandemic.**Conclusion**

The COVID-19 pandemic period that has been ongoing until now and experienced by Panggunghar-jo Village is basically a condition that is not only addressed and responded to as a disaster, but a challenge that is responded to as an opportunity to take creative and innovative action steps to ensure the survival and even thriving of the village residents.

The movement carried out in Panggungharjo Village to tackle COVID-19 can be seen as a political transformation movement that originated from the village. In this case, Panggungharjo village shows that the village which has been considered to be the outskirts and backwards can actually become the front line of safety for its residents.

The success story in Panggungharjo could be best described by several aspects. Prasetyo et.al (2017) in their book "Innovation to Establish Prominent and Sustainable Village" stated that there are 5 bases of innovative village: 1) Visionary Leadership, 2) Participation of Villagers, 3) Institutionalization, 4) Collaboration, and 5) Information and Technology.

Panggungharjo Village can provide an example of how the empowerment of villagers by working together can be a "candlelight" that should be able to inspire other villages in Indonesia. While many city residents are trying to protect themselves and are reluctant to see their neighbors during this pandemic, the Panggungharjo Village shows the opposite by building strength based on local wisdom through "gotong royong" (mutual assistance) and solidarity between residents.

The movement carried out to overcome the COVID-19 pandemic cannot be separated from the key success factor, namely the role of leadership of the village head that dares to take progressive and innovative action steps by utilizing various sources, both human and non-human resources owned by the village. In this case, the intelligence to utilize digital technology has had a very significant impact in benefiting all villagers.

The idea and realization of the "Village Market", which is basically supported by an internet application platform has become the economic strength of

the villagers and can even benefit residents outside the Panggungharjo Village. In this case, Panggungharjo Village is an example of good practice in building village independence through synergy between village head leadership, resident's participation, and the use of digital technology.

Interestingly, Panggungharjo Village is able to become an example for carrying out political transformation movements originating from the village, and how a village that has been considered fringe and backward can become the frontline of safety for its residents. The village of Panggungharjo can give an example of how the empowerment of the villagers by mutual assistance becomes a shining candle when many city people actually insulate themselves and are reluctant to see their neighbors. All attempts at self-reliance in terms of food, economy, society, are built on the ability of citizens to be empowered by standing on their own two feet.

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The Case of "Rice Paddy Art" of Inakadate Village in Aomori Prefecture in Japan under the COVID-19 Pandemic

Tetsuya Endo

I. Geographical Information: Inakadate Village in Aomori Prefecture in Japan

Figure 1. Inakadate Village Geographical Location



Inakadate Village located on the south side of the Tsugaru Plain, with the Hakkoda Mountain Range in the east and Mt. Iwaki in the west, was created on April 1, 1955 by the merger of Inakadate Village and Kodenji Village. Many archeological remains from the Jomon period and the Yayoi period have been confirmed in the village. In particular, 656 paddy fields in the middle of the Yayoi period have been detected, and the Tareyanagi site, which is designated

as a national historic site, is valuable in the history of rice farming in the Tohoku region. Upon its discovery, it attracted national attention at that time.

Figure 2. Rice Fields with Mount Iwaki's View



Since there are shallow Ishikawa flowing in the center of the village and Hirakawa flowing north and south on the border with Hirosaki City, most of the land is covered with soil (alluvial soil) generated by the accumulation of soil carried to the river water. Rich water and fertile soil have been seen as giving a lot of blessings from long ago to the present. While

making agriculture a core industry, the village is promoting the attraction of companies by taking advantage of its location near Hirosaki City, Kuroishi City, Hirakawa City, and Fujisaki Town. Local officials are making efforts to continue development.

In this way, Rice Paddy Art, which is providing "new tourism resources" in the village where flat land without sea or mountains is found, has been practiced for more than 30 years. Many people involved in Rice Paddy Art, including villagers, have endeavored to improve production accuracy, attracting attention from home and abroad, and more than 300,000 customers visit every year. This is the birthplace of "Rice Paddy Art (Rice Field Art)" in all of Japan, and its artistry is increasing year by year, attracting national attention. In the winter, the village has created "Snow Art", which draws art with footprints on the snowy field. The aim is to be a place where citizens can enjoy art in all of the four seasons.

II. Demographical - Ethnographical Information

Looking at the population by industry and by gender, the number of men working in the village is the highest in order of agriculture, manufacturing, and construction, and the number of women is the highest in order of agriculture, manufacturing, and medical/welfare. Next, looking at the composition ratio of major industrial employees in the village by age group, the proportion of both men and women aged 60 and over in agriculture is high (male 68.1%, female 73.1%), and the aging population is increasing. In 2015, the number of employees and people attending school in the village was approximately 3,670.

Although it decreased from 2000 to 2010, it increased in 2015. The "day/night population ratio", which is the ratio of the daytime population (the population of working, attending school, and the unemployed in the village) and the nighttime popu-

lation, has been around 0.8. Most of the population works outside the village during the daytime. It can be said that the number of people who work and go to school outside of the village is higher than the number of the people within the village. The village is called a "bed town village" and this trend is increasing.

There is one medical clinic and one dental clinic. There are two schools, Inakadate Elementary School and Inakadate Junior High School. There is no high school and many students go to high schools in the surrounding area. In addition, there are 3 nursery schools and 1 certified nursery school. The village provides full subsidy for medical expenses for infants and children from 0 years old to the third grade of junior high school, payment of child-birth celebration, reduction of childcare fees for the second and subsequent children, payment of celebrations for entrance to elementary and junior high schools for the third and subsequent children, etc.

They provide various support to the child-rearing generation, so that they can raise their children with peace of mind in Inakadate Village. In recent years, the number of children waiting to enter nursery schools has been zero, and local officials are creating a village that is friendly to both children and young families.

III. Inakadate Village "Practice of Rice Paddy Art"

3.1. Background

In Aomori, the northernmost part of Honshu, which is extremely cold in winter, there is the Tareyanagi site, which was found by archaeological discovery (1981) of the former paddy field where rice cultivation had already been carried out about 2,100 years ago.

Figure 3. Rice Industry in Tareyanagi Site



Inakadate Village was the first place in Japan where Rice Paddy Art was performed. Many Jomon archaeological sites (15,000 BC to 300 BC) have been found in this area, and it was nominated as a World Heritage Site by UNESCO Headquarter in May 2021. And, since it was thought that rice cultivation was carried out after the era, the discovery of the ancient paddy field site called Tareyanagi Iseki at that time was said to be a great discovery that would rewrite conventional textbooks.

In addition, because it was a cold region, the yield of rice was small, and it was not blessed with special products other than rice. Therefore, the people tried to increase the yield per 10a of rice and became the number one in Japan for 11 consecutive years in rice cultivation.

Figure 4. Inakadate Local Government Office Building



However, as in other rural areas and depopulated areas, the population declined, aging accelerating, and as a countermeasure, in 1987 the "Village Pro-

motion Council of Inakadate Village ^{1"} led by JA and the Chamber of Commerce and Industry was established, and consideration of revitalization of the village began. In the village, they searched for an event plan related to rice cultivation. The concept was decided to "experience rice planting and harvesting by hand", but it was not fun to just plant and harvest seedlings.

Mr. Suzuki who was the former Assistant to the Planning and Tourism Division and current Welfare Division Manager, described that time as follows²:

Figure 5. Rice Paddy Art Site in COVID-19 Pandemic



"(The use of ancient rice) was originally suggested by a person who was in charge of events in the Commerce, Industry and Labor Section when there was no office for tourism at that time in the Industry Division. At the elementary school's field work site where they planted rice, harvested rice, and made rice cakes at the end of winter, the three colors of purple, yellow, and green of edible rice plants were just neatly planted. The person in charge saw and thought that they could draw pictures or write letters by planting these as well."

¹ Village Promotion Council of Inakadate Village: The Village Promotion Council has been responsible for the emergence, development, and institutionalization of this project. This council is composed of the village, the agricultural cooperatives and the chamber of commerce. It was established in 1987 and has been engaged in activities such as tourism development and holding events to revitalize the village's industry. In recognition of the project's activity, they received the Tourism Commissioner's Award in the "Industrial Tourism Town Development Award" (2017).

² On May 26, 2021, a direct hearing survey was conducted at the Inakadate Village local government office.

Figure 6. Yamata no Orochi Mythology in Rice Paddy Art



In the first year, there were about 100 participants. At that time, before constructing the new government office building, a 2m to 3m tower was built in front of the rice fields, and participants could see the rice pictograms. After this, the event had continued for 10 years, they decided to apply for a program called "1000 Peoples' Power Contest" by NHK. This was a program in which 1000 people competed in a contest format.

At that time, there were 200 to 300 participants, and it was difficult to gather 1000 people. However, at the turning point of the 10th year, elementary and junior high school students also participated from all the schools, that 1000 people gathered and planted rice seedlings. Mr. Suzuki said as follows: "If I had done the same thing for nine years and didn't have such the opportunity in the 10th year, rice art might not have been continued by this time."

After that, in Inakadate Village, rice art gained popularity both at home and abroad, and the international local brand of Inakadate Village "Rice Paddy Art (Tambo Art)" became very famous. One notable success was a collaboration with Star Wars, and the other was a collaboration with Hakuhodo, one of the largest advertising agencies in Japan. The distributor of Star Wars is Walt Disney, and since Star Wars was the first new work in 10 years, the artists put a lot of effort into it, and it gained world-wide recognition.

The other success was the development of a natural rice code. This is a software application which utilizes a QR code related to the Rice Paddy Art. A person who comes for sightseeing reads the QR code embedded in the actual product or poster with a smartphone and uses Inakadate rice for PR and sales promotion.

Hakuhodo announced the development of this application, which was unique at that time and used advanced technology in various competitions, winning gold medals and the grand prix in a number of internationally prestigious contests. As a result, the popularity of Inakadate Village "Rice Paddy Art (Tambo Art)" has improved, and the number of tourists has increased accordingly, exceeding 350,000 people.

3.2. Lessons for Village Innovation

Figure 7. Rice Paddy Art as Tourism Resources



It has been suggested that it is important to establish "leadership with a strong will" and "community-adhesive concept for products" in order to create regional (grassroots) innovation (Endo, 2018: Endo et al., 2016). It is not just a local service, a special local product, but a concept that incorporates community-based information (a narrative). Regarding the former factor, leadership with a strong will has been cultivated in Inakadate Village under the leadership of the current deputy village mayor, who is a firm believer in rice cultivation and agriculture and has

helped develop a supportive organizational culture.

The organizational culture has been transitioned from "experience-based rice cultivation" to the "Rice Paddy Art" by community-based narratives utilizing ancient rice and the deep local history. The international local brand gradually matured.

Mr. Suzuki said the following: "In these regions, agriculture was originally the main industry. Since they found the Tareyanagi site, we have focused on the rice more than ever. In that sense, the foundation was solid, and the staff started from a small event at first, but it gradually became bigger, so they increased the number of staffs involved, and as a result it became a recognized international event. Perhaps in the beginning, if the village had attempted to implement a big rice art program without adequate staff they might have failed even if assisted by consultants. Instead, by pursuing an incremental approach with staff borrowed from other sections, the village has developed broad expertise and a skilled staff."

This suggests that the Tareyanagi site, a cultural center in this rice-growing community, symbolically exists, and on that foundation, the events and the businesses have been evolving in layers and gradually in relation to each other.

In addition, regarding the leadership and organizational culture of Inakadate village local management. Mr. Suzuki stated as follows:

"We have not cared much about who is in the organizational job divisions or who is the person in charge. We divide ourselves into groups and work in each group in the rice paddy project, but then it doesn't matter what the hierarchical relationship is. For example, when the division chief goes into the rice field, there should be a person who can operate the total station used for surveying. So, if a young man in his twenties in the construction division can operate it, one of the division chiefs will work by his instructions. This has led to stronger working relationships and a more personal approach."

During the COVID-19 pandemic, the village utilized management concepts developed from the rice art project to coordinate mass inoculations, which started on May 9th (for elderly people over the age 65). The village has created a special venue in the central public hall next door and has 20 staff members come out per day. In the Rice Paddy Art project, we have two or three people from each section to manage the inoculation venue on Sunday. Different people come every time, so everyone can respond immediately. All the elderly is pleased³.

In this way, communication and teamwork in the workplace are very good. It is suggested that a strong so-called coaching-type leadership contributes significantly to the building of such an organizational culture in the workplace.

IV. Challenges and Opportunities

In rural Japan, the population of farmers is declining and the proportion of elderly people (aging) is increasing. Among them, promotion of primary producers' diversification into processing and distribution (sixth sector industrialization) has been carried out. In addition, high-value-added agricultural management efforts have been carried out through green tourism and the like. However, it is stagnant due to the corona virus.

Although not as much as in cities, there was a sense of stagnation in interpersonal interaction. So far, rural areas have been affected by the corona disaster comparatively less than urban areas. There

³ According to a female employee (silver age) working at "Roadside Station Inakadate"," In response to the corona pandemic, the staff at the government office were actively working. I did vaccination on the very first day. So, it was a little crowded. But the people after that said it wasn't crowded. And when I went the second time, the injection was finished 15 minutes and I took a rest for 15 minutes. So, I came home in 30 minutes. It was so smooth, and I was surprised. After all, it's teamwork." (An interview on June 19, 2021)

are problems in agricultural production and supply under the pandemic. As a measure to promote digitalization and increase productivity, smart agriculture is being carried out, and incentive projects (subsidized projects, etc.) are being implemented.

Cooperation with business organizations and universities is being carried out. For example, this is carried out by a company called OPTiM in collaboration with Nagasaki University and Nagasaki Prefecture. They are also developing business in Aomori City. Cooperation with rural areas is also being carried out. In Itayanagi Town in Aomori, drones are used to spray pesticides on apples in cooperation with town-scale agricultural organizations and local governments.

But in the case of towns and villages, it seems to be an experimental operation. Considering profits, business will tend to link with larger organizations. Before the pandemic, many NPOs and non-profit organizations collaborated with agricultural organizations to sell goods and stay at private lodgings. Due to the influence of the coronavirus, this area has been stagnant.

Efforts for unique regional innovation are occurring. For example, Hiso Co., Ltd. has implemented "Travel Home Time" in Itsuki Village, Kuma District, Kumamoto Prefecture (a village with a population of 1,500). It is a service for a limited time such as long holidays and three consecutive holidays, where the destination area provides online services on a daily basis to arrange delivery of local specialties and goods that make the holiday special. Every evening, they will deliver delicious food and local products.

Kamikatsu Town, Tokushima Prefecture, very famous for "leaf businesses", is working on an entrepreneurship school. It is an effort to formulate new business plans during the pandemic. In the old-fashioned villages, even if they try to take on the challenge of developing new business plans, there would be no people or local governments

willing to be involved. So, in places like Kamikatsu town, entrepreneurs are trained to develop new initiatives to address current challenges.

V. Innovation in COVID-19 Pandemic

Figure 8. Second Place of Rice Paddy Art

Methods of utilizing existing capital and human resources to promote unique ideas are important





Figure 9. Souvenir Shop near Rice Paddy Art





for making local innovation happen. When Rice Paddy Art became a hot topic at home and abroad, the number of inbound tourists and the number of people who interact with each other increased. Inakadate Village has a history of developing as a rice-growing area in the northeastern part of the country from ancient times and is centered on the agricultural population.

Rice Paddy Art, which was conceived by staff of the village government office, was first implemented in Japan. After that, it was continuously implemented with the cooperation of the government office and residents, and the content was enriched. It became an international local brand of Inakadate Village. At that time, the idea of turning rice fields as fields for agricultural production into art for edible purposes was very unique.

At first, the staff wanted to help grow rice and promote agriculture and agricultural products. After that, the number of people visiting to see it increased, and it has become a major tourism resource in the village. In addition, when the space overlooking the rice field art became narrower and the waiting time

for tourists became longer, it was decided to set up a venue for the second rice field art.

As the number of tourists increased, souvenirs began to be made. In addition, the project that had been covered by the village's public funds received admission fees. The number of tourists who come to see rice paddy art increased dramatically, but after visiting the rice paddy art, most of the tourists did not spend a lot of time in Inakadate Village. They often didn't stay for long periods of time and leave without benefiting the local economy.

However, as the number of people from overseas increased, exchanges with visitors from overseas were born, the need for learning English increased, and a network of cross-cultural exchanges was established. At school, efforts to learn English have become active. In this way, a social business that started with a tourism promotion idea, has affected various areas of education and industry in the local communities. And measures are being sought to successfully expand this social business in the local communities.

Figure 10. Railroad Station near Second Venue of Rice Paddy Art



As student interns at nearby universities, efforts have been also made to contribute to the local communities in the form of new product development and support for students to learn the results and the process. As a project of the central government, there is a "regional cooperation corps", and in lnakadate village, they invite them as cooperating members and play a role of promoting the project so that their projects can be carried out sustainably and bring wide value to the local communities. The village chamber of commerce chairman has advocated the development of new tourism-related products and the launch of businesses to benefit the local community.

The model includes: Small founders \rightarrow Informal organization (organizational culture that can accept ideas \rightarrow formation of "place" \rightarrow social business in formal organization \rightarrow participation of residents (inhouse network that residents can easily participate

in, existence of organizational culture that encourages innovation)) → local leaderships that can create an excellent innovative local management

Two years ago, a new idea was materialized so that the business could be expanded even in winter. It is "Rice Paddy Snow Art" made from footprints, such as walking on the fresh snow on rice fields. This also caused a great response.

Due to the coronavirus pandemic, the Rice Field Art in 2020 was canceled⁴. However, the history of

⁴ According to a male employee who has been working for 20 years at the tourist spot "Roadside Station Inakadate", the effect of Rice Paddy Art is great. However, only a few customers come due to the corona pandemic. In addition, the playset facilities that have been maintained are too old to be used. The number of employees has been reduced, and even if they want to do marketing using IT such as the Rice Code, there are no human resources who can handle it. "I'm glad they did Rice Paddy Art. But that was canceled by Corona. There are places where children play. Parents and children came. (But now) They don't come, and no tourists come. I could not go out. We could not manage here. Corona is scary,

Rice Paddy Art and promotional videos are disseminated on YouTube. Rice Paddy Snow Art is also introduced on YouTube. Furthermore, in 2021 this year, the plan has been to realize collaboration by linking the designs expressed in Rice Paddy Art with Tsugaru's original production movies. When one success model is achieved, it leads to the planning of the next model and the business is expanded.

In Aomori Prefecture, a domestic student venture called OPTiM (Nagasaki Prefecture, Nagasaki University) has partnered with a local bank to establish a subsidiary in Aomori City and promote smart agriculture, such as spraying drone pesticides. Inakadate Village does not have a direct contract, but there is a high level of interest in pesticide reduction and organic farming in Japan. In addition, countermeasures against the aging of farmers and labor shortages, smart agriculture is being practiced with a view to shifting from pesticide spraying to pesticide-reduced agriculture.

Aging of the working-age population, labor shortage, pinpoint pesticide spraying and pesticide reduction agriculture by drone (organic farming oriented), and the practice of smart agriculture is leading to the realization of high value-added agriculture.

VI. Summary and Further Studies

Leadership is needed to promote innovation and address challenges like the coronavirus scourge. A leader is someone who can explore the needs of residents and prepare for prevention and future pandemic disasters. It is desirable to be able to stra-

tegically divide into long-term tasks and short-term tasks. The short term is a defense against coronavirus infection. Everything needs to be done to stop the infection. In the long term, in order to create a sustainable society, local leaders must lead by inviting, nurturing, and providing opportunities to start businesses.

The role of local wisdom is to break through the current crisis with local innovations that are unique to local areas, making use of natural resources and local human resources, recognizing resources are scarce in rural areas and they are of great value. Also, the ability to have an international perspective, to be able to think differently, and to have a flexible idea are very important.

In recent years, migration to rural areas has been advocated in order to stop the overconcentration in Tokyo, general population decline, and depopulation of rural areas. Currently, the terms "regional revitalization" and "two residence places" are being used. So far, green tourism and inbound tourism have been advocated. In addition, the sixth industrialization, that is, high value-added agricultural production and product development have been advocated.

Looking at the cases of Kamikatsu Town and Itsuki Village, the emergence of social leaders (like Tomoji Yokoishi in Kamikatsu Town) and potential resources (leaves and elderly people in Kamikatsu Town) were utilized. And they have supported in facing the difficulties and in building sustainable rural societies.

Creating a foundation that can foster regional innovation: To do this, the rural areas need human resources to make a model business successful and support of the entire regional management. Long-term investment is important. And now, with coronavirus, strong defensive measures are needed to prevent short-term losses. For that purpose, excellent human resources, team formation ability, and regional management ability are required.

although the number of infected people is smaller than that of the neighboring city (Hirosaki)." "They say don't go to other prefectures or don't go here and there. I can't go anywhere anymore. For the time being, the vaccine has been completed for the second time. We are careful." (An interview at Road Station Inakadate, Male Employee, on June 19, 2021)

In creating a local brand, it is necessary to have local leadership with a strong will, but here I would like to focus on "coaching-type leadership" that draws out potential capabilities. This coaching-type leadership is a "leadership that focuses on the strengths of human resources and draws out their abilities." Furthermore, the role of local government management is extremely important. It is suggested that such human resources and management have been carried out in Inakadate Village.

In carrying out inter-regional exchanges and inbound promotions, the selection of places as unique venues (historical, regional resources, etc.), community factors of the production of things and making narratives that can compile all the community representative resources are important.

And under the COVID-19 crisis, virtual inter-regional exchanges utilizing SNS, and process management-type efforts to build a sustainable network with the above in mind are essential. Regarding the

cumulative total of infected people (per 1 million people) for one year and two months, Aomori Prefecture (including Inakadate Village) is about one-sixth of the metropolitan areas (Tokyo, Osaka) and one-third of the national average. A village with abundant nature such as Inakadate alone is considered to have a much lower number (Figure 11).

In this paper, Inakadate Village in Aomori Prefecture has been chosen as an example of Japan. The Rice Paddy Art in this village is very famous. This case study presents two hypotheses:

- (1) Where the population is small, not overcrowded, and the natural environment is good, there is little virus infection. In other words, it is a defensive element.
- (2) If there would be a successful experience in which the villagers are united before the pandemic, the village's efforts to address the pandemic could also be united.

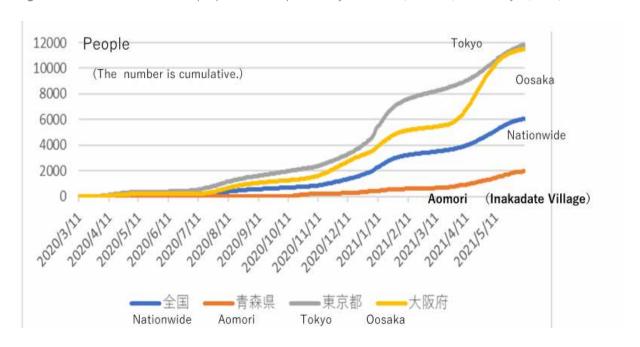


Figure 11. Number of Infected People per million Population by Prefecture (March 11, 2020 – May 11, 2021)

Figure 12. Inakadate Village Farmer's Restaurant







In other words, it is suggested that it is important to have confidence and vitality in the communities through decentralization, creating communities where people can live comfortably in the natural environment, and continuous local innovations, in order to be effective in mitigating the challenges like the coronavirus.

This village studied here is a district with a history of 2,100 years of rice cultivation. It is rare in the cold Tohoku region. And although ancient rice is not edible, its leaves are colored purple, yellow, white, etc. The people draw pictures using these colored leaves on the rice fields. They call them Rice Paddy Art. This idea belongs to local government officials. Although it is a small village with a population of 7,000, more than 300,000 tourists came from home and abroad every year before the pandemic.

The ideas and teamwork of all the officials, that is, the creation of local leaderships and organizational culture, have been the keys to success. And now, the local officials have a problem with coronavirus, but they say that this is smaller problem compared to metropolitan urban areas and, because the vaccine work is being carried out smoothly, the villagers are grateful.

In this paper, the social business of rice field art itself is the village innovation, and it has characteristics. One is that we make the best use of local resources and human resources at hand, and the second is that it is a unique initiative of local government marketing. The village has succeeded in local branding, and now the demand for very delicious rice and related products is increasing.

The fashionable, relatively reasonable, and delicious pesticide-reducing "rice" restaurants and cafes have been created. Success was achieved by coaching-type leadership with a strong belief, building an organizational culture, and a narrative that utilized local resources. In the future, charting a course to proceed with the business with high aspirations without losing to commercialism, and expansion of pesticide-reducing production in cooperation with drones and AI will be important issues.

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COVID-19, Welfarism, and Village Administration: A Case Study of Duggiralapadu Village in Andhra Pradesh State of India

Suneel Kumar Chitturi

I. Introduction

"Soul of India lives in Indian Villages," said Mahatma Gandhi, called as father of the Nation for India. Even today as per the World Bank statistics for the year 2020, 65% of the Indian Population resides in more than 6 lakh¹ Indian villages with majority of rural population depending on agriculture and allied activities for their livelihood. Given the importance of villages, village administration in India has a hoary past with the concept of local self-government dating back to many centuries with community assemblies mentioned in the Vedic texts.

In the Chola Kingdoms, the village council, together with its sub-committees and wards, played an important part in administration, arbitrated disputes and managed social affairs. However, the present structure of Local Self Government institutions took shape in 1688, when the British established a Municipal Corporation at Madras (2nd ARC, 2007, 2), and Lord Ripon's resolution in 1872 during British colonial rule, which is hailed as Magna Carta of Local Government in India.

Subsequent to coming into force of constitution, Directive Principles of State Policy (Part IV, Article 40) laid down that the state shall take steps to organize village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government (2nd ARC, 2007, 3). Consequently, beginning with states of Rajasthan and Andhra Pradesh in 1959, the Panchayat Raj system was at work in some form in all the states of the Indian Union.

However, constitution clearly listed the subjects under the jurisdiction of each tier of government (centre, states) with state subjects under List

 $^{1\,1\,}lakh$ equals to one hundred thousand.

II of the Seventh Schedule and concurrent subject (federal and state jurisdiction), included in List III. However, in respect of local governments, since all local government subjects by definition are also state subjects, states have a vital and legitimate role to play (2nd ARC, 2007, 16). The actual functions to be devolved on local governments are the responsibility of the states (2nd ARC, 2007, 15). Therefore, local governments in India are not uniform in function, though they are similar in structure with some states like Kerala empowering village administration

However, in most of the states, village administration is nothing but extension of the state administrative apparatus, rather than institutions on their own standing. As per 2nd ARC, 93 per cent of the total revenues of rural bodies were derived from external sources. Also, the percentage of revenue expenditure covered by their own resources for rural and urban local bodies is 9.26 per cent and 68.97 percent, respectively in 2002-2003. The percentage of revenue derived from own taxes for rural local bodies are 3.87 per cent in 2002-2003 (2nd ARC 2006, p.59).

II. Andhra Pradesh Tryst with Village Administration

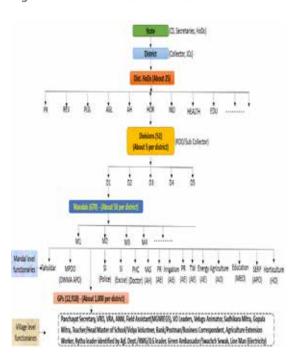
Andhra Pradesh is the 8th largest state in India with a geographical area of 1,62,970 sq. km, divided into 13 districts. Situated in a tropical region, the state has the 2nd longest coastline in the country with a length of 974 km. In terms of population, Andhra Pradesh is the tenth largest state in the country accounting for 4.10% of the total population of the country, as per 2011 census.

The literacy rate of the state is 67.35, percent lower than India's literacy rate of 72.98 percent. Sand, silt, and clay are the basic types of soils, and most of soils are made up of a combination of these three. The Per Capita Income (NSDP) of Andhra

Pradesh at current prices has increased from Rs.1,68,480 in 2019-2020 (FRE) to Rs.170,215 in 2020-2021 (GOAP, 2021 p.1).

As per the official estimates of the Planning Commission for the year 2011-2012, the poverty ratios for rural and urban areas of united Andhra Pradesh were 10.96% and 5.81% respectively and the Head Count Ratio for the combined ratio stands at 9.20% compared to all India percentage of 25.70%, 13.70% for rural and urban areas, and the combined was 21.92% (GOAP, 2021, p.259). The administrative structure at the district level is three-tier with mandals and villages below the district level.

Figure 1. Andhra Pradesh Administrative Structure



III. Village Secretariat and Volunteer System in Andhra Pradesh

Andhra Pradesh State launched Village Secretariats on 2nd October 2019 with the aim of decentralizing the administration of the state and taking governance to the door steps of the people. The largest of its kind in India, the government has set up 15,004

secretariats across 663 mandals and 120 municipalities in the state, creating about 388,000 jobs so far—134,000 at the secretariat level and 254,000 at the volunteer level.

To manage operations, a Grama Volunteer, Ward Volunteer and Village Secretariat and Ward Secretariat (VSWS) Department was created, and exclusive administrative post—joint collector—has also been established at the district level to supervise and monitor the activities relating to the VSWS department. The Village secretariats are vested with overall responsibility to implement the welfare schemes and have assistants discharging various functions across the departments of Panchayat Raj, land and survey, medical and health, animal husbandry, dairy and fisheries, police, women and child welfare, water supply, power, agriculture and horticulture, and tribal welfare (Menon, 2021).

The village secretariats act as one stop shops for the implementation of all the welfare and development activities by the secretariats aided by any army of volunteers reaching out to the last of the citizens with each volunteer taking care of 50 households. These village/ward secretariat staffs with first-hand information from the public play important role in services like distribution of income certificate, Aarogyasri cards, rice cards, house site applications, pattadar passbooks, Rythu Bharosa services, collection of taxes related to Municipal and Revenue departments, etc. (Ameen, 2021). The village secretariat system is steadily emerging as a model for the future governance of the state-the development of an eco-system that uses technology for the uninterrupted delivery of various government services to citizens (Menon, 2021).

IV. Volunteer Network, COVID-19, and Welfare Management

Together with the village secretariat system, one

volunteer is appointed for every 70-100 households, tasked with doorstep-delivery of government services and to ensure that beneficiaries are identified and mapped for proactive service delivery (Menon, 2021). During the pandemic, volunteers tracked those with a travel history, like foreign returnees, those with symptoms of cold and fever to ensure that there is no community spread of the disease.

If there are any symptomatic persons or foreign returnees in these 50 households entrusted to them, the volunteers will make an entry in a mobile application given to them which are directly monitored by the district health authorities and primary health care centers. Each ward is being monitored by two teams. The primary team comprising ward volunteers and Asha workers monitors the health status in every household. If there are any suspects, they report to the secondary team, which comprises a doctor along with paramedical staff, who take the follow-up action.

Volunteers only conducted the survey to trace anybody with symptoms irrespective of travel history, but also played an essential part in delivering essentials and services at the grassroots level during the lockdown (Apparasu, 2020). The volunteers also played a major role in spreading awareness about the do's and don'ts among the families in the villages and urban areas.

V. COVID-19 Management Strategy of Andhra Pradesh

The state of Andhra Pradesh spent around Rs. 2,246 crore² for the prevention, mitigation, and treatment of COVID-19 with around 1,200 crore incurred on medicine alone. Rest of the expenditure was incurred on testing laboratories and testing facilities, oxygen supply, and ventilators, etc. (Rao, 2021).

²¹ crore equals to ten million.

However, the two notable interventions include the use of technology and the launching of 104 call center service and Arogya Sri scheme.

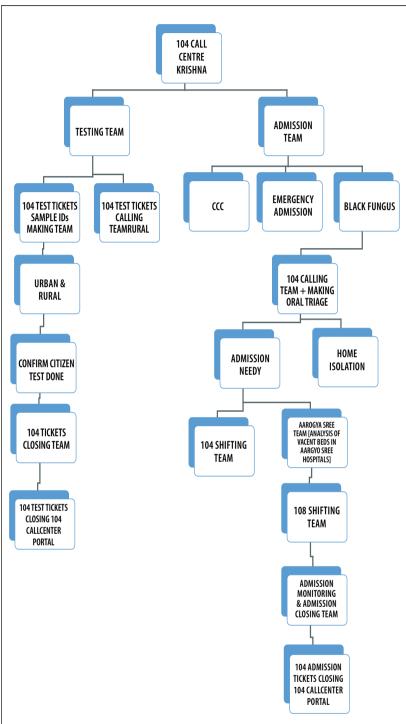
5.1. 104 Services for COVID-19 Management

The call centers provide information pertaining to COVID-19, medical advice, and action-oriented instructions when people seek help in hospitalization, testing, etc. The 104-call center is virtually connected to 1,400 doctors, who lend their service when the calls are re-routed to them. Further, the call center is connected to all districts, and the sub-center in each district also works round-the-clock and are personally monitored by district collectors and joint collectors (Indian Express, 2021).

5.2. Arogya Sri Health Insurance Scheme

Arogya Sri Scheme was launched by the Andhra Pradesh government in 2007 to provide cashless medical treatment to low-income families. Under the scheme. eligible families will be issued an Arogya Sri card which enables treatment to selected list of diseases/ailments. With the ravaging of the COVID-19 pandemic, the state brought COVID-19 treatment under the Arogya Sri and as of April 2021, one lakh people availed free medical treatment under the Arogya Sri scheme incurring the state an expenditure of Rs. 310 crore (Rao, 2021). Thus, bringing the COVID-19 related treatment under Arogya Sri insulated the poor from the high expenditure on the health.

Figure 2. 104 Call Center



5.3. Wage Employment during Pandemic

The government of Andhra Pradesh has relied on the Mahatma Gandhi National Rural Employment Guarantee Scheme to create employment in the rural areas. Launched in 2006, the scheme provides for guaranteed employment of 100 days for anyone above 18 years willing to do unskilled manual work.

As per the socio-economic survey released by Government of Andhra Pradesh, the state occupies 6th place in the country in generating employment under MNREGS in the year 2019-2020. In 2019-2020, 80.02 Lakh wage seekers belonging to 46.65 Lakh households were provided wage employment with an average employment of 54.44 days per household and 8.68 Lakh households completed 100 days with the average wage rate of 227.78.

Due to reverse migration during COVID-19 pandemic, AP has issued 3.83 Lakh new job cards ben-

efiting 6.23 Lakh wage seekers and 2.44 Lakh new members are added to the existing job cards. In addition, 7.36 lakh deactivated Job cards are activated (AP socio-economic survey 2020-2021). In the budget year of 2021-2022, Andhra Pradesh stood top in the country in terms of utilizing the labor budget sanctioned under the Mahatma Gandhi Rural Employment Guarantee Scheme (MGNREGS) by the end of June 2021.

As against 20 crore person days sanctioned, the state completed over 83.5 per cent of the annual target in the first quarter of the fiscal year itself with a payment of Rs 2,015 crore was made to female workers and Rs 1,603 crore to the male workers (Viswanath, 2021).

5.4. Financial Benefit Schemes

JAGANANNA AMMA VODI	Provides financial assistance to each mother or recognized guardian in the absence of mother, who is below poverty line household, to enable her to educate her child/children from Class I to XII (Intermediate Education) in all recognized Government, Private Aided, and Private Unaided schools/ Jr. Colleges, including Residential Schools/ Colleges in the state from the academic year 2020-2021.
	In A.P, Ammavodi has become a shield against the pandemic assault, which armored people with cash support. Unlike the other, Ammavodi in the state of A.P has become a caregiver to 43 lakhs vulnerable families. Crediting of Rs.15,000/- in their bank accounts has helped the poor mothers to cope up BPL families.
Rythu Bharosa	RBKs were introduced — with one RBK for every 2,000 population.
Centres	Under Rythu Bharosa a sum of 13,000 per year is credited into accounts of farmers in two installments.
	Agriculture, horticulture, sericulture, veterinary assistants, and doctors along with revenue officials would be available at these centers, which part of the village secretariats are.
	RBKs will organize live workshops to explain the best agricultural practices and train the farmers.
	Group of experts and direct call centers would be attached to these centers, so as to clarify the doubts of farmers on different issues.
	Quality-certified seeds, fertilizers, and pesticides would be sold through the centers. Similarly, for aquaculture farmers, the best quality feed and suggestions on best practices would be provided.
	Awareness would be created among farmers about crop insurance, cattle insurance, and other related issues through these centers.
YSR Cheyutha	Under the scheme, financial assistance of Rs. 75,000/- for 4 years is provided to the women of age group 45 - 60 years old belonging to BC, SC, ST & Minority categories to provide sustainable livelihood and to develop entrepreneurship skills among the women.
	Beneficiaries of the scheme are at liberty to use the amount they received for any purpose of their choice.
	For those who wish to invest in business and other economic activities, the government will facilitate them in different ways by providing marketing, banking, and technical assistance to create livelihood opportunities to interested women beneficiaries.
	Government is facilitating tie up with reputed companies like Amul, ITC, HUL, Alana, Procter and Gamble, Reliance, and also banks, to ensure beneficiaries run their business without any risk.

5.5. Village Infrastructure

Bulk Milk Chilling Units (BMCUs)	It has been decided to construct 9,899 buildings for BMCUs, as these also provide reassurance to every dairy farmer on the quality of the milk they are supplying, how many liters, and how much money they get can be found on the spot by slip.
Mana Badi Nadu -Nedu	State government's flagship programmed 'Mana Badi Nadu-Nedu', under which the entire infrastructure in schools is being revamped using government funds as well as through funding from corporate groups and civil society and philanthropic organizations.
	Nine different components — toilets with running water, drinking water, electrification with fans and tube lights, major and minor works, furniture for staff and students, English labs, painting for the entire school, green chalk boards, and construction of compound walls were taken up.
YSR health Clinics	The Andhra Pradesh government decided to launch 13,000 health clinics across the villages of the state and ensure availability of 54 types of medicines in the village clinics.

VI. Case Study of Duggirala Padu Village

Duggirala Padu Village is located in G. Konduru mandal of Krishna District in Andhra Pradesh. Located in the Agriculturally prosperous Krishna District of Andhra Pradesh, which has 40.81 percent urban population (AP socio-economic survey 2020-2021, 178). The village is populated mostly scheduled castes and scheduled tribes, which are the most vulnerable sections of the Indian population.

The village which is basically an agrarian village is mostly cultivating cotton, which is a commercial crop with most of the households are small and marginal farmers with land area less than 2 acres of land. The

Figure 3. Duggirala Padu Village in Krishna District Andhra Pradesh



village has some percentage of people who are dependent on casual agriculture labor and around 80 percent of the families are recipients of government welfare grants like public distribution system according to the Village Elected Head, Ram Babu.

BASIC INFO				
NAME	DUGGIRALAPADU			
VOLUNTEERS	6			
AREA IN Acres	1415.914 Ac			
AGRICULTURE EXTENT	871 Ac			
POPULATION (2011 Census)	1063			
MALES	567			
FEMALES	496			
NO OF HOUSES	310			
SCHEDULED CASTE	208			
SCHEDULED TRIBE	58			
MAJOR CROPS				
PADDY	132			
MAIZE	84			
COTTON	305			
MANGO	130			
SUBABULU	120			
PAPAYA	10			
DRUMSTICK	90			
	871			

VII. COVID-19 Management and Employment Generation Strategy in the Village

Villagers have diligently adhered to the COVID-19 guidelines with "no one in the village ventures out without wearing a mask and carrying sanitizer," according to a resident twice a week, sanitation workers carry out flogging operations and spraying of sodium hypochlorite in the village. On alternate days, drains are cleaned. Out of the eight provision stores in the village, people of one ward are allowed to purchase essential commodities on a particular day to avoid crowding. The villagers have together decided not to conduct any fair, festivals or other rituals in the village, so that public gathering is avoided. Further, no resident of Duggiralapadu attends functions in relatives' houses in neighboring villages (Sen, 2021). Health workers and volunteers conducted door to door surveys every fortnight to assess the health of elderly and high-risk people (Lanka, 2021).

Duggirala Padu Village generated employment to the villagers under the Mahatma Gandhi National Rural Employment Guarantee Scheme, both in 2020-2021 and 2021-till date. Most of the villagers, almost the entire families in the village have Arogya Sri Health Insurance cards thus insulating the villagers from medical expenditure. 80% of the families of the village received

Figure 4. Spraying of the Sodium Hypochloride in the Village



monetary welfare benefits from the state. Thus, while the collective action of the community prevented the pandemic, the state's support ensured their insulation to economic distress during the pandemic.

Conclusion

Andhra Pradesh's approach to governance of vast expanse of villages followed the principle of subsidiarity focused on ensuring availability of services at the doorsteps of the people. This governance at doorsteps using the network of volunteers supported by village secretariat system which decentralized the administrative system has laid the foundations for revolutionizing the rural governance. This network of volunteers and the village secretariat system helped the state to track, monitor and aid victims of COVID-19 during the pandemic and also ensured supply of essential commodities to those in-home isolation or in need of assistance.

The Army of Volunteers also ensured the enrollment of everyone in the welfare schemes to which they are entitled to. What stands apart Andhra Pradesh Approach to village development is that the infrastructural projects at village level are still in stating stage and, thus studying their impact on the socio-economic life of the villages will be of interest in the near future. In spite of the advantages Andhra Pradesh model of village governance holds, it has its drawbacks in the form of huge expenditure incurred on the volunteers and for various welfare programs which are taking the state into debt trap. Even though the suitability of the welfare model for adaptation is doubtful in case of low- and middle-income countries like Asia, the system of secretariat and volunteer is quite worthy of emulating. Regarding the Duggirala Padu Village, it only offers a case study of how collective action at the community level aided by the state can address a crisis situation during a pandemic. This Duggirala Padu case can be more or less generalized to villages across the state which rely on agrarian economy, where job losses are minimum compared to the towns.

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Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era

Reconstructing Village's Innovation in Pandemic Period: Human Development and Cultural Perspective of Nagari Situjuah Batua

Riswanda, Daniel Hermawan

I. Overview of Nagari Situjuah Batua

Nagari Situjuah Batua is located in the Situjuah Limo Nagari District of Limapuluh Kota Regency, West Sumatra Province, Indonesia. The area of Nagari Situjuah Batua comprises 15.49 square kilometers of the total 20.88 square kilometers making up the Situjuah Limo Nagari sub-district (Langgam. id. 2020).

Figure 1. Map of Nagari Situjuah Batua



SOURCE: MINISTRY OF VILLAGES, DEVELOPMENT OF DISADVANTAGED REGIONS AND TRANSMIGRATION OF REPUBLIC OF INDONESIA

Nagari Situjuah Batua has a population of 5,379 people, consisting of 2,666 men (49.56%) and 2,713 women (50.44%).

Nagari Situjuah Batua consists of 6 jorong, namely:

- 1. Bumbuang
- 2. Lakuang
- 3. Tapi
- 4. Tangah
- 5. Koto
- 6. Kubang Bungkuak

A *Jorong* or *Korong* is a division of administrative territory in Indonesia, which is domiciled under Nagari.

II. Nagari Situjuah Batua Demographic Information

Historically, Situjuah has a link to the Emergen-

Figure 2. Situjuah Event Monument



SOURCE: (KUKUH, 2018)

Figure 4. Meeting Place



SOURCE: (KUKUH, 2018)

cy Government of the Republic of Indonesia (PDRI) 1948-1949 in Central Sumatra, as one of the historical witnesses to the independence of the Republic of Indonesia. PDRI was formed on December 22, 1948 by several leaders of the Indonesian independence fighters and led by Sjafruddin Prawiranegara.

The government was formed because of the arrest and exile of several leaders of the Republic of Indonesia, namely President Soekarno, Vice President Mohammad Hatta, Foreign Minister Agus Salim, Syahrir, and others by the Dutch during the Second Dutch Military Aggression on December 19, 1948 (Diskominfo Kabupaten 50 Kota, 2021).

The Nagari Government Center is located in Jorong Tangah with a total of 20 people within the government structure consisting of 1 wali nagari, 1 secretary, 3 section heads, 3 heads of affairs, 6 jorong heads, 3 computer operators, and 3 general officers.

Figure 3. Heroes Mosque (Mesdjid Pahlawan) in Situjuah Batua



SOURCE: (KUKUH, 2018)

Figure 5. Mass Grave of Heroes



SOURCE: (KUKUH, 2018)

The population of Nagari Situjuah Batua is divided into various age groups, where the productive age group dominates the composition of the existing population, namely 20-24 year-olds totalling 143 people (2.66%), followed by 10-14 year-olds (2.49%), 15-19 year olds (2,34%), and 25-29 year-olds (2,34%). Based on population data, Nagari Situjuah Batua will enjoy a demographic bonus in 2030 – 2040, so the availability of abundant human resources of productive age must be followed by improving the quality of education and skills (Afandi, 2017).

Based on the level of education, the population of Nagari Situjuah Batua is dominated by 1,808 people (33.61%) who have not finished elementary school or its equivalent, followed by those who did not attend school (18.11%) and lastly those who finished high school or its equivalent (16.55%). Nagari Situjuah Batua needs to pay special attention to providing education for villagers, since it is a gate-

way to create a generation of more competence in knowledge and abilities.

Table 1. Nagari Situjuah Batua Demographic Based on Age

Group	Total	
	n	%
5 - 9 years old	77	1.43%
10 - 14 years old	134	2.49%
15 - 19 years old	126	2.34%
20 - 24 years old	143	2.66%
25 - 29 years old	126	2.34%
30 - 34 years old	72	1.34%
35 - 39 years old	92	1.71%
40 - 44 years old	97	1.80%
45 - 49 years old	84	1.56%
50 - 54 years old	90	1.67%
55 - 59 years old	90	1.67%
60 - 64 years old	70	1.30%
65 - 69 years old	65	1.21%
70 - 74 years old	53	0.99%
Above 75 years old	97	1.80%
Total	1416	26.32%
Not Fill Out	3963	73.68%
TOTAL	5379	100.00%

SOURCE: NAGARI SITUJUAH BATUA WEBSITE (2021)

During the COVID-19 pandemic, online education is an alternative that can be further developed in terms of the readiness of village infrastructure to accommodate the need of access to the internet, as well as facilitate adequate electronic devices, so that students can still receive education within the limitations and restrictions of the applicable crowd (Hermawan, 2021).

Demographically, the majority of people in Nagari Situjuah Batua are engaged in agriculture and plantations. As seen from the data, farmers/grounders dominate the profession with a total of 702 individuals (13.05%). There are also several

professions which do not directly influence the village economy, such as taking care of the household (24.97%) and students (22.46%).

Table 2. Nagari Situjuah Batua Demographic Based on Educational Level

Group	Total	
	n	%
No Schooling	974	18.11%
Not Finished Elementary School/Equivalent	1808	33.61%
Graduated Elementary School/Equivalent	810	15.06%
Junior High School/Equivalent	668	12.42%
High School/Equivalent	890	16.55%
Diploma I/II	26	0.48%
Academy/Diploma III/Young Bachelor	59	1.10%
Diploma IV/Bachelor	141	2.62%
Master	3	0.06%
Doctoral	0	0.00%
TOTAL	5379	100.00%

SOURCE: NAGARI SITUJUAH BATUA WEBSITE (2021)

Table 3. Nagari Situjuah Batua Demographic Based on Profession

Group	Total	
	n	%
Not Working	1178	21.90%
Taking Care of Household	1343	24.97%
Students	1208	22.46%
Retired	44	0.82%
Government Employees (PNS)	103	1.91%
Indonesian National Army (TNI)	1	0.02%
Indonesian Police (POLRI)	6	0.11%
Trading	30	0.56%
Farmers/Grounders	702	13.05%

SOURCE: NAGARI SITUJUAH BATUA WEBSITE (2021)

However, there are still quite a lot of villagers who are not working (21.90%), so it is becoming

quite a task for Nagari Situjuah Batua's government to create job opportunities to accommodate them. The strength of the village economy is one of the main elements that can build sustainable local capabilities in the village (Hermawan, 2020).

III. Nagari Situjuah Batua's Challenges and Opportunities During COVID-19 Pandemic

This section aims to map out the challenges and opportunities rising during the COVID-19 pandemic from different perspectives, as evident in the way Situjuah Batua and its distinct community actually live with SARS CoV-2, prevent longer-term damage and plan to build a new future.

The section provides important lessons that can be well-heeded in perhaps answering the similarly shared question: does the post-COVID recovery period offer the same opportunities among different rural areas, and how can they be harnessed with respect to the given conditions in a village?

As we emerge from COVID-19, we need a new reconstruction, rebuilding the old-fashioned way — by investing in innovation-driven growth. The COVID-19 pandemic is a human tragedy of epic

Figure 6. Vaccine Dissemination by Situjuah Limo Nagari Sub-district Health Center



SOURCE: NAGARI SITUJUAH BATUA WEBSITE (2021)

proportions that may put some of us in the midst of a caregiving crisis. Taking a cue from socio-cultural innovations performed by Nagari Situjuah Batua might indeed help with the crisis.

Nagari Situjuah Batua seems to have its very own potential in terms of history and culture. This is shown by the village tourism strategy. Situjuah Batua is known for making their cultural ceremonies part of local tourism packages. 'Batagak Pangulu' is an example of the Situjuah Batua art and culture festival. This cultural event in particular is held in memory of the heroic acts of the village ancestors in West Sumatera. The event then merges the formal ceremonies of the Walinagari Office and Nan Tuo Situjuah Batua Hall.

Both buildings refer to community gathering places where community leaders can gather the participation of the locals. The pandemic period marks the importance of what might at first glance appear to be a regular arts and culture festivals, but which has been transformed into an income-generating capacity for its citizens. The village community is able to alter cultural values to the extent that community events (such as music and culinary) run in tandem with local efforts to cope with the pandemic.

The degree of community participation is also evident in online 'halal bihalal' gatherings that refer

Figure 7. Online 'Halal bihalal' Gathering



SOURCE: (AGUSTINO, 2020)

to an Islamic tradition of asking for and giving forgiveness at the end of the fasting period. The gathering normally involves social groups of the same ethnic origin and/or groups of people at the same workplace. The online gathering could be considered innovative with respect to the pandemic period that has upended nearly every aspect of life. The village community's choice around supporting innovation-led growth in the short term enables long-term healthcare management of the villagers.

The gathering above replaces the 'mudik basamo' (homecoming tradition) plan that is supposed to be held just at the end of fasting month. The online innovation could at least prevent the coronavirus spreading in the village by providing an alternative platform for villagers working outside the village, usually far from home to actually enter the village and join the homecoming tradition.

The 'halal bi halal online' initiative gathers local government, socio-religious leaders, and networking community organizations onto the same stage where they can communicate with each other suitably without having to worry about breaking the social and physical distancing policy. It is no surprise that both the village programs and public education messages endorsed by the community leaders could reach the villagers easily.

Situjuah Batua community organization ensures the family bond of every village member wherever they live and work as shown by the existing organization, *Ikatan Keluarga Besar Situjuah Batua* centered in Jakarta, while some villagers work around the country.

The pandemic situation calls for village innovation to cope with the negative impacts of COVID-19 in various aspects depending on how such innovations fit the context and why. More importantly is when, where, and to what extent the innovation can contribute to improving the capacity of the villagers to survive the pandemic.

According to the Ministry of Villages, Development of Disadvantaged Regions and Transmigration of Republic of Indonesia (2020), village innovation can be indicated by three indexes, which are the Social Resilience Index (seen from the aspects of education, health, social capital and housing); the Economic Resilience Index (seen from the variety of communal production, access to trade centers and markets, logistics access, banking access, and regional openness); and the Environmental Resilience Index (seen from environmental quality, natural disaster and disaster resilience). The following discussion will describe some of the indexing aspects related to the village innovation of Nagari Situjuah Batua.

Figure 8. Situjuah Batua community organization ties in family bond



SOURCE: IKATAN KELUARGA SITUJUAH BATUA NUSANTARA

Nagari Situjuah Batua scores 0.8971, categorized as an independent village in terms of the development index. The village governance of Situjuah Batua has implemented strategic programs to deal with systemic impacts of the COVID-19 pandemic. Whilst other surrounding villages faced difficulty in distributing government support packages during 2020-2021 for people and businesses affected by the COVID-19 pandemic, the villages' responses to the rather confused situation¹ were by simply putting the nominated names of those receiving government funding support openly at kiosks, stalls,

¹ The Indonesian government announced 600 thousand rupiahs (per person) of funding support to help ten million Indonesians during the coronavirus outbreak. Whilst aiming to support the poorer segments of Indonesian society, the distribution create confusion for some given the system could be unfamiliar for those executing the support in administrative unit at the next-to-lowest level (*Rukun Warga*).

Figure 9. Health Post "Prevent COVID-19"



SOURCE: NAGARI SITUJUAH BATUA WEBSITE (2021)

places of worship, and the cultural center.

The last strategy mentioned is quite community-minded since the community responded by providing people entering the village a place to carry out self-isolation. The isolation facility is located in a small traditional wooden building or school, where 'Limbago Adat' (a non-profit cultural community organization) provides assistance to the daily needs of COVID-19 survivors.

This community-funded isolation reduces the risk of spreading infection and helps to protect the locals staying inside the village. This community self-support also helps people with low incomes who have to self-isolate due to COVID-19 infection. It resonated with the Regent of Limapuluh Kota who commended the district's fight against the COVID-19 pandemic as a model to be emulated.

Nagari Situjuah Batua took a somewhat innovative approach to waste management where a dump removal program generates income for the village. Villagers work hand-in-hand to collect domestic, traditional market, office and industrial waste, and then transform it into recycled products. Yet another innovation is shown by the ability of the local community organization 'Rumah Anak Nagari' to

support school children dealing with the disruptions to education systems.

Figure 10. School Scholarship (Sekolah Sepakbola Nagari)

Innovation in education during the pandemic period



School Scholarship, School resources supports, Sekolah Sepakbola Nagari

SOURCE: PROCESSED BY THE AUTHORS

The communality on display is obvious by witnessing the network of locals who live and work outside the village to gather donations for providing scholarship and distance learning facilities for the villagers. Students can also rely on sport scholarships (*Sepakbola Nagari*) to help finance their school fees, so that the pandemic situation will not hurt their chances of having a proper education.

IV. Innovation in COVID-19 Pandemic: Humanity-Cultural Perspective

This section discusses the indicators of village innovation with respect to creative efforts done by Nagari Situjuah Batua in coping with the pandemic period. The indication aims at finding out how to extend the boundary of thinking to cope with challenges and create opportunities in terms of providing actionable innovations.

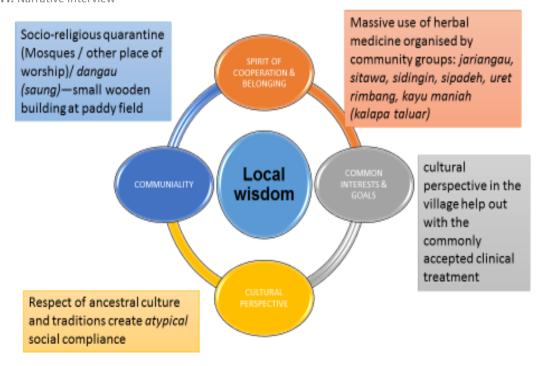
The discussion of village innovation is about creating innovation and best practice models that can be successfully implemented to overcome the problems caused by the pandemic in some Indonesian rural areas. The 'state of the art' of innovation in Situjuah Batua enables the interconnectedness of the humanity-cultural perspective and the so-called 'creative economy'.

To start with, Situjuah Batua is known for its communality whereby a cultural perspective har-

monizes with the commonly accepted clinical treatment for COVID-19. For instance, the village community organized -local and mandatory- community and independently based quarantine facilities in 'Surau' (local term for a mosque) and 'dangau' (a traditional wooden house).

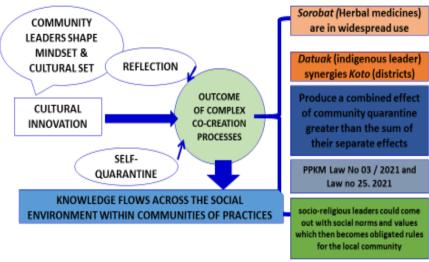
The locals then supplied traditional herbal medicine, such as *jariangau*, *sitawa*, *sidingin*, *sipadeh*, *uret rimbang*, *kayu maniah*, *and kalapa taluar*² to the COVID-19 survivors. What seems to be a noteworthy case is how the locals create mutual-aid systems, where people work cooperatively to meet the needs of everyone in the community. Community leaders support the government programs to cope with the COVID-19 crisis. Herbal medicine is known

Figure 11. Narrative Interview



² The types of medicines refer to traditional herbs used in Native Minang cultures to treat COVID-19 symptoms such as muscle aches, chills, sore throat, runny nose, headache; chest pain, nausea, vomiting, and such. The information is based on an interview with Syahrul Abdullah, a native Minang man who used to live in the village.

Figure 12. Control Across Silos



FOSTERING THE INCLUSION OF DIVERSITY WITHIN SOCIETY

SOURCE: PROCESSED BY THE AUTHORS

locally as 'sorobat' and is believed to be a supreme medicine in the village community.

COVID-19 has accelerated the adoption of local values and pushed the village further into surviving the pandemic. The Situjuah Batua case shows how a peculiar type of innovation can enhance their local and regional responses to COVID-19, and force villages to adapt to the difficulties of their village communities through applicable socio-cultural innovations. Essentially, this case narrates how rural communities are innovating in the face

of COVID-19. This briefing section focuses on innovation in socio-cultural development linking closely to the humanitarian perspective in the context of the SARS CoV-2 pandemic.

COVID-19 has pushed Indonesian governments at all levels to operate in a context of subsidy schemes as well as regional funds for capital risks. The 'datuak' (local term for a community leader) has launched important initia-

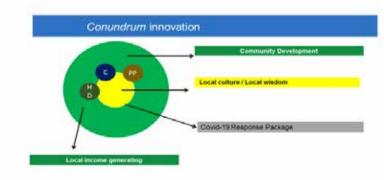
tives to help villagers cope with the impact of the novel coronavirus. The leader has synchronized 'koto' (a local term for subdistrict) with *PPKM Darurat* (officially imposes restrictions towards community activities) in the village. In this way, socio-religious leaders can come up with social norms and values, which then become obligated rules for the local community.

The various innovations made by the village

community leaders in sustaining environmental development and education during the pandemic period came together with innovations in public health. Some social interventions are proven to be part of a basic nutrition service package for children with stunting issues. In this way, Situjuah Batua has established health support for the underprivileged who are unable to afford medical services.

The intervention includes providing assistance for locals who want to process the Indonesian Na-

Figure 13. Conundrum Innovation



tional Social Health Insurance (JKN: Jaminan Kesehatan Nasional) implemented by the BPJS (Badan Penyelenggara Jaminan Sosial) with the objective of providing quality healthcare services. The assistance also provides incentives for cadres working for integrated community healthcare services, a Family Planning Program and a sanitation program.

Economic innovation has been one of the village's main standout virtues by establishing the *Badan Usaha Milik Nagari*– a Village Owned Enterprise. The establishment has been working side-by-side with *Bank Sampah Nagari*, the decentralized waste banks whose concept for waste management was grounded largely h on local wisdom. The villagers are considered successful in transforming the waste materials into marketable handicrafts (*kerajinan anak nagari*).

On the other hand, the village organizes monthly collections of domestic, event/celebration, and industrial waste. The local wisdom-based income contributes the equivalent of six million rupiah monthly, which they call 'Pendapatan Asli Nagari (PAN)' or Nagari real income. Its Village Cooperative System (Koperasi Unit Desa Nagari) has created opportunities for the locals to establish 'UKM-Mart', a micro-scale business unit that has been transforming the food retail sector and providing further market opportunities, in addition to rural savings and loans.

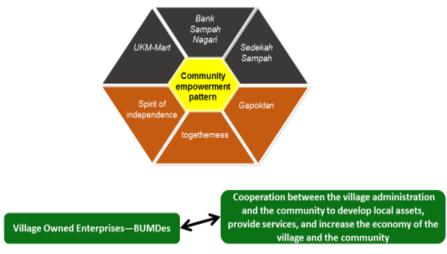
The cultural philosophy of 'nagari barasiah' (clean village) and 'nagari bapitih' (well-funded village') appears to shape the way villagers think about how to find interconnectedness between cleanliness and income-generating opportunities. This, too, is an innovation.

Figure 14. Innovation in Public Health



SOURCE: PROCESSED BY THE AUTHORS

Figure 15. Innovation in Local Economy



By the same token, a community scale economic business approach seems to endorse independent living at least for some villagers. This is evident in the way community participation could endorse a program called 'Cinta Anak dan Kemenakan' or 'Nagari Rancak'. This program is about compulsory monthly dues for locals working in particular sectors (such as the public sector, shop owners in the private sector and farmers) to set aside more-or-less one percent of their income. The gathered fund is managed for the use of community social programs on education scholarships, schooling instruments, and nine main food items mostly.

Nagari Situjuah Batua is preparing now to launch a Syariah Economic program enforcing their socio-religious values, namely 'adat basanding syara' and 'syara basanding kitabullah', which is basically a religious and cultural integration towards the construction of the bedrock of social life. The program brings in a new perspective for the villagers to learn and to apply a

Figure 16. Minang Virtual Tourism Festival



SOURCE: LOKET.COM

'people-centered economy' (ekonomi kerakyatan3).

Halal tourism (*wisata halal*) is one of the implementations. For the villagers in particular, the implementation of the Syariah banking system opens many opportunities to support local economic

Figure 17. Human Development. Culture. and Pandemic Period of Nagari Situiuah Batua

Providing public service during the pandemic time

Local-wisdom based incone generating

Accountability Local Politics Village resilience against covid-19 Kampung Tangguh Covid-19

 Volunteer team Covid-19



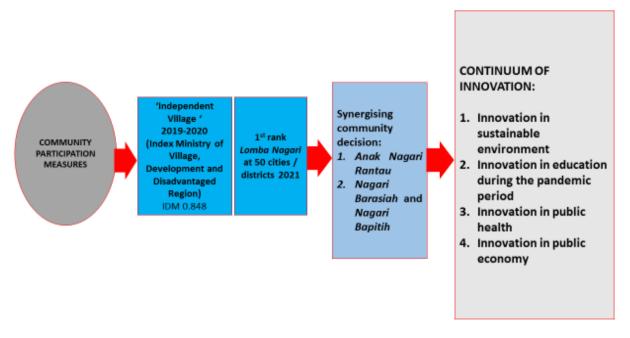
luran Cinta Anak dan Kemenakan ⊢Nagari Rancak

Recycling domestic dumpto become village income Pendapatan Asli Nagari (PAN)



³ The people-centered economy was popular in the late 1980s. The concept was popularized by Indonesian economists like Boediono and Mubyarto propounding concepts regarding the "people's economy" (Ekonomi Kerakyatan). The concept represents the economic idea of trying to formulate an interpretation base with the development aspirations of the local community.

Figure 18. Nagari Situjuah Batua's Continuum of Innovation



SOURCE: PROCESSED BY THE AUTHORS

development. Whereas the village socio-religious leaders endorse a system like Syariah savings and loans, the role of Syariah investment in overcoming the economic impact of COVID-19 may be valid. It is evident at least in the tourism and agricultural sector.

Minang Virtual Tourism Festival could be seen as an innovation as it may have supported the region during the pandemic period. Due to the SARS CoV-2 pandemic, villages in the district have been working together to host their first ever 'Ranah Minang Virtual Tourism Festival'. The innovation is hoping to maintain economic flow as usual and to offer a new kind of tourism activity in which some locals may rely on for their income.

V. Summary and Further Studies

To sum up, this chapter reports the insights of Nagari Situjuah Batua. It describes how powerful cultures are built and driven by a unique set of values which are personality-centered. The village has a

unique and very thick village culture, which could be used as a reference in the prevention and handling of COVID-19. The village government has successfully handled the COVID-19 pandemic by underlining a key socio-cultural role in ensuring social cohesion in COVID-19 prevention and response.

These insights call for a more cohesive approach presenting ideas from the ancestral cultural orientations of Minang society. Insights of the village exemplify how socio-cultural innovations could bridge creative sectors and improve ecological systems. The socio-cultural approach connects with the work of the World Bank and UNESCO's so-called culture-based approach of the COVID-19 recovery. Whilst the COVID-19 pandemic has impacted the arts and culture sector around Indonesia, communities also experienced the pressure on maintaining their cultural identity and with significantly less income.

Nagari Situjuah Batua communities are showing innovative actions that are indeed noteworthy, and furthermore provide a model for the Indonesian gov-

ernment to set up an assistance program to support similar cultural innovations. The actions done by the village indicate the on-going misconception that arts and culture are simply a drain on the social budget requiring a steady stream of subsidies and which diverts scarce public money away from other more urgent COVID-19 programs.

Quite the contrary, this sector is proven to be a major contributor to the economy. Socio-cultural-based actions can likewise serve as a resource for social and psychological resilience in the face of crises. The ability of village communities to access service provisions and aid could be guaranteed by cultural leadership in these circumstances, since it helps them cope with the psychological distress caused by the pandemic period and assures a level of good mental health in the recovery process.

Situjuah Batua displays an integral ingredient of culture that could bring about cultural institutions that are critical for strengthening inclusivity amongst those who otherwise may be left behind. The COVID-19 pandemic might have created inequalities in rural regions, resulting in some places and people being disproportionately affected, especially where social distancing is impractical and public spaces and infrastructure are insufficient.

The community engagement in the village creates experiences of collaboration, while the benefit of post-crisis communities produces a collective capacity for healing, resilience, and social cohesion. Innovative community-engaged designers of Situjuah Batua continue to assist the communities in being clear about their needs and asserting that no member of the village is left behind.

Prioritizing innovation today is the key to unlocking potential post crisis growth. The village is a cultural construct, where built structures and open spaces are closely linked to the social fabric. Culture

is also interwoven in communities' sense of identity, connectedness, and the ability to bounce back and recover from the pandemic situation. The village community embraces a culture-based approach ensuring that community needs, values, and priorities are central to the recovery process.

Taking a cue from Nagari Situjuah Batua could further open better research to explore how and why a post-COVID-19 community could foster better social inclusion, build accessible public spaces and civic institutions. This is a co-creation of innovative, income-generating cultural heritage, that can promote diversity, creativity and innovation, as well as integrate the capabilities of social and cultural aspects into COVID-19 recovery and development.

It is worth encouraging further exploration of how strong local values along with egalitarian leadership in Situjuah Batua has led the village to be less dependent on government funding support. Instead, the charismatic leadership of 'Pucuak Adat/Datuk Udo' (the highest rank of community leadership) has brought in a process of interrelated actions through which villagers express their common interest in local, regional, and national issues.

Community leaders take responsibility for the well-being and improvement of their communities in terms of financing, training programs, and learning opportunities. This kind of cultural community leadership helps community development groups become active change-makers. For Situjuah Batua, in particular, their cultural and socio-religious leaders possess empathy, the ability to inspire, strong communication skills and pride in their community. This socio-cultural capacity has inspired participation, development, and sustainability for strong community resilience in coping with the COVID-19 pandemic.

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Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era

Village Innovation and Sustainability in Facing the COVID-19 Pandemic through the Smart Village Concept: The Case of Hong Ha in Vietnam

Thai Thanh Ha

Introduction

COVID-19 has put the world on defense, resorting to the masks, social distancing and lockdown in order to cope with this pathogen. However, some innovations such as vaccine or e-learning platforms have been realized out of the pandemic at the breakneck speed. Unfortunately, these innovations have been mostly studied in urban contexts, leaving the rural village innovation unanswered. In this research, the author focuses the qualitative analysis on Hong Ha Village as a case study to figure out the successful public innovations through its swift and pragmatic digital transformation during the COVID-19 pandemic. Based on the research findings, implications and recommendations are to be drawn for public policymakers so that they would be able to modernize

their public policy making process to deal with disruptive events like COVID-19 in the future.

I. Geographical Information on Hong Ha Village

Hong Ha Village is located in the half-way location on the traffic No 49 between Hue City and Aluoi District Township. During the Vietnam War, Hong Ha used to be the gateway that partitioned between the American forces and Vietnamese communist guerrillas. There was a number of bloody fighting that still left its scar on Hong Ha soil as well as the Hong Ha ethnic people over there.

Stretching in 10-km length, Hong Ha Village is on the traffic way that is connected to Ho Chi Minh trail and therefore, leading to the People Republic Democratic of Laos up to the Long-range Mountain (or Truong Son Mountain in Vietnam). Hong Ha Village is landlocked with no direct access to the sea. Therefore, geographical location of Hong Ha is considered as a competitive advantage. It is situated about 40 km away from Hue City, in the middle between the Bot Do and the City of Hue.

Figure 1. Hong Ha Village Map



Hong Ha Village covers a natural land area of 11,388.21 hectares. Among these natural lands, the agricultural land area consists of 96% which the forestry land accounts for 10,561 hectares. The village possesses a population of 1,764 inhabitants (as of 2019 Census) and be grouped into 446 households.

The cultural resources of the ethnic minority in Hong Ha Village are the biggest assets. These assets include the dialect, costumes, foods, festivals and so on. Therefore, the economic development and solid livelihood of Hong Ha people should go hand-in-hand with the preservation of these assets on a sustainable basis. The geographical location of Hong Ha Village is as follows:

- Up to the Eastern border, it is adjacent to Huong Nguyen Village, A Luoi District
- Up to the Western border, it is adjacent to Hong Kim, A Ngo, Son Thuy Villages, and A Luoi District Township.
- Up to the Northern border, it is adjacent to Huong Phong and Phu Vinh Villages, and Huong

Tra Village Township.

 Up to the Southern border, it is adjacent to the two districts of Phong Dien and Huong Tra.

Table 1. Land use and types of land in Hong Ha Village

No	Types of Land	Hectare(s)	Percent- age
1	Agricultural land	10,938.53	96.05%
1.1.	Land for agricul- tural production	375.83	
1.1.1	Land for annual cropping	106.70	
	For Rice growing	18.61	
	For other annual crops	88.10	
1.1.2	Land for perennial crop cultivation	296.13	
1.2	Forestry Land	10,561.42	
1.2.1	Land for productive forestry	3534.60	
1.2.2	Protective forest- ry Land	7,026.82	
1.3	Aquaculture land	1.28	
2	Non-agricultural land	447.06	3.93%
2.1	Housing land	19.92	
2.2	Special use land	316.29	
2.2.1	Land for adminis- trative buildings	0.65	
2.2.2	Land for public utilities construction	0.65	
2.2.3	Land for public purposes	312.25	
2.3	Land set aside for cemetery	1.42	
2.4	Surface and of river, springs, streamlines	109.43	
3.	Un-used land	2.62	
Total Na	tural Land	11,388.21	100%

SOURCE: HONG HA VILLAGE ADMINISTRATION 2019

Being composed of the following 5 units: Cân Tôm, Pa Hy, Cân Sâm, A Rom, Pa Ring, Hong Ha is one of A Luoi District's villages listed as the Designated Poor Districts as stated in Decision No 900/QD-TTg issued on 20th June 2017 by the Prime Minister. As a consequence of the Vietnam War, there are a number of people with various kinds of disability such as war invalid, Agent Orange vic-

tims, or mine-injured people with disabilities (PwD) in Hong Ha Village. A number of these PwDs have to be reliant on the social well-being policy of the Vietnamese Central Government, which is to make subsidies through the annual budget for Hong Ha Village Administration. Table 1 above shows the basic information of land use and types of land.

The economy of the Hong Ha Village has been reliant on natural resources extraction or forestry products. Prior to the COVID-19 pandemic, the village has been quite innovative in seeking economic development for the Hong Ha people. For example, Hong Ha Village leaders have shifted away from the reliance of natural resources as a main livelihood. Service sector, such as homestay or community-based tourism development have been expanded rapidly to lure the foreign travelers and domestic tourists to the village.

Besides, the Hong Ha villagers' Interest Groups were formed to facilitate the trade of the local agricultural products with external merchants. Also, forestry land allocations were also given to village's households so that investments were made to maximize the economic well-being for the villagers themselves as well as increase the standards of living for the villagers.

II. Demographic Characteristics and Ethnicities of Hong Ha Village

There are five types of ethnic people in the village namely: Ko Tu ethnicity occupies approximately 60%, the rest 40% goes to Pa Co, Ta Oi, Ta Hit ethnic minority, and Kinh people. The majority of the population was Ko Tu ethnicity which accounts for 60% population being concentrated on 3 units such as Can Tom, Pa Hy, and Arom as can be seen in the map above (Figure 1).

Table 2. Ethnicities among Hong Ha village population

Ethnicities	House- holds	Person	Average Person/ Household
Pa Co	127	502	3.95
Ta Oi	71	269	3.79
Ko Tu	194	765	3.94
Ра Ну	18	82	4.56
Van Kieu	1	6	6.0
Kinh	35	140	3.0
Total	446	1764	3.96

SOURCE: HONG HA VILLAGE CENSUS 2019

Hong Ha Village has a wide potential range of natural resources, coupled with its strategic location as well as historical relics. These assets could be potentially used to stir up entrepreneurship among youngster in Hong Ha. Yet, in the long term, utmost attention should be paid to the preservation of these cultural assets as well as the worship places of the villagers.

Before COVID-19, the village had quite a large number of tourists who come to visit and enjoyed the homestay experience. The experience tourism demand had been on the rise with 300-400 tourists per year on average. However, the villagers still do not pay sufficient attention to the establishment of brand name for their farm stay or homestay services. They are negligent of the marketing strategy with regards on how to offer a better service and thereby retaining high come-back rate among the outside visitors.

Hong Ha Village has a wide variety of agricultural produce such as chicken, sticky rice, indigenous cassava, and sweet potato of unique quality. Yet, ethnic minority people are still very shy of the contact with outsiders and tourists. Recently, they have obtained the funding assistance and financial supports from the Ministry of Culture, Sports and Tourism and Japan Foundation to set up and preserve the traditional hall (named as Gúól Hall). Thanks to this Hall, Hong

Figure 2. Hong Ha Village Traditional Hall



Ha Village has received more than 300 visitors who came to experience the ethnic minority culture just from April to August every year. The village is planning to carry out more community-based activities in this traditional hall, such as ethnic trade fair or community events.

Hong Ha ethnic minority people are very worried about the exploitation of natural resources for economic development and quick consumption of agricultural specialties on the basis of having a strong brand-name. Special attention should be given to the non-timber products in Hong Ha, such as natural bee honey which often brings back high-income to the villagers. It was cited that on average, a man in Hong Ha earned more than 40 million VND (equivalent to \$1,700) with which he could set up a clean toilet for his family, even though this man just sold raw natural bee honey, not yet processed, to the local traders.

Furthermore, Hong Ha ethnic people has yet to think of other ideas in order to turn this honey into other products, such as beauty cosmetics and medicines to cure disease, so that they could have more economic benefits from this value-added idea. This is because value-added products are very high priced (in case of bee honey, which can be priced at 200 thousand VND per litter). Besides, Hong Ha was planning to organize once-a-month high-land fair, so that the networks of ethnic minority including small buyers, traders, and seller can meet up together. Below are the findings from the basic data of the secondary sources.

Figure 3. Hong Ha Traditional Food



Table 3. Basic Information of Hong Ha Village

No	Indic	ators	Unit	Quantity
A. Cultivated lands for crops and plants				
1	Rice	wet-land	Hectare	36
2	Maize			55.4
3	Cassava			157.5
4	Vege	tables		7.5
5	Bana	ina		3.1
6	Ratta	an		157.5
7	Acac	ia		786.7
8	Rubb	er		210
B. C	attles			
1	Buffa	alo	Head	115
2	Cow			336
3	Goat			271
4	Pig			306
5	Chicken			9298
C. C	hild e	ducation		
1	Malnutrition of children under 5		%	1.3
2	Percentage of children going to school			
	2.1	From 2 to 4 years old	%	95
	2.2	From 5 up to 6 years old	%	100
	2.3	Primary education	%	100
	2.4	Secondary school	%	98
	2.5	High school	%	80
3	People with Medicare and insurance		%	98.9
4	People with vocational training		%	1.4
5	Newly created jobs		Job	68
6	Household with clean and running water		%	80
7	Household with lighting utilities		%	100

No	Indicators Unit Quar				
D. E	D. Environmental sanitation				
1	Household with proper toilets	%	95		
2	Household with proper waste landfill	%	69		
E. To	E. Tourism and homestay services				
1	Eco-tourism at Parle, A Doi springs	Man-visit	15.615		
2	Homestay at Guol Tradi- tional Hall	Man-stay	223		
3	Total revenue from homestay up to Nov	VND	30,950,000		
4	Total production costs for homestay service	VND			

SOURCE: HONG HA VILLAGE ADMINISTRATION STATISTICS 2019

The total number of family-owned small businesses in Hong Ha Village are 39. There is also a construction company which is going through the license registration process and tourism cooperative to operate the eco-tourism activities at Parle Spring destination. This tourism service cooperative possesses 9 transport cars, 3 rice-grinders, 3 log chain saws for processing wood products and 2 land tilting tractors. The handicraft activities are operated on home-based circumstances. Deng weaving activities are typical for women in Hong Ha Village. However, these money-earning jobs have been operated on order-by-order bases, not on an industrial scale.

2.1. Cropping and Cultivation

Cropping and cultivation of various plants or industrial trees are the main sources of the income for the ethnic people who seem to be increasingly dependent on the agricultural extension for their living. However, the risk of natural disasters or calamity as well as unpredictable pricing scheme for agricultural products often puts Hong Ha people into a precarious dilemma at any time. The difficulty of getting agricultural products into the tourism and travel industry for more added value and income is also problematic for ethnic minority people.

This results from the fact that neither their product quality is in accordance with the standard, nor the quantity is sufficient enough to generate the economies of scale, thereby, giving a chance to Hong Ha people for extra income, better pay job, and so on. The banana plants can be an example for failing to meet the demand of the coming visitors to the village. This failure is attributable to the quality conformity which is not up to the standard desired by the outside visitors as well as to the quantity not meeting the order placed by the restaurants in the peak demand.

2.2. Animal-Raising

According to the 2019 survey by the team from Hue University of Agriculture and Forestry, core animals for ethnic minority people of Ko Tu are buffalos, cows, pigs, chicken, ducks, and goats. There are 9% of the households surveyed indicating that the average of 3.25 with the aim to use these animals for land sloughing, tilting, and log-transporting.

A percentage of 25% households surveyed show their intention of selling their cows to outside traders for extra income. The average of cows raised by these households is 6 cows per household. There are 23% of total household surveyed with an average of 6.2 pigs indicating that their animal production is for sales to outside traders rather than for in-house consumption.

The most important livelihood for the villagers rests with the chicken raising activities. There are 91% of the total households surveyed likely to participate in this income generating production. With an average of 25 chickens, every household shows that they raise the chicken, ducks, or goats for their own family consumption as well as for sales to the outsiders to catch up with the economic opportunities and to gain extra income for their family.

2.3. Forestry and Extractions of the Forest Products

The total areas of economic forests amount to 786 hectares out of which newly planted forest area

is about 45.3 hectares and ready-for-extraction forest area accounts for 78 hectares. The average annual income out of forest production is about 30-40 million VND (equivalent to \$USD 1,300-1,700) per hectare of Acacia for pulp and paper industry.

Rattan growing seems to become a profitable plant for ethnic minority people as the rattan-planted area has increased up to 157 hectares in 2018 and by 50 hectares in 2019 according to the new-planting scheme. Non-timber products, such as natural bee honey extraction can be very profitable for ethnic minority peoples if its good quality can be proven and guaranteed to the travel visitors.

2.4. Community-Based Tourism Development

Figure 4. Experience Community-based Tourism in Hong Ha Village



Hong Ha tourism has become a destination attracting many visitors. However, at present not so many people know Hong Ha ecological tourism brand. Just with the information of "Pârley stream - Hong Ha homestay" on Facebook is not enough, Hong Ha tourism needs to find the way to promote its brand image and to aim at building better services.

Also, the 2-hectare homestay area in Hong Ha Village needs to put into full operation. This is strategically located at the stop before entering the Pârley springs in order to serve visitors. At the same time, Hong Ha CPC should call upon the outside investors to quickly complete the floating routes on Cat Tom Bay, Am Bat (eco-tourism area of Pârley), so that visitors can travel more conveniently.

Figure 5. Food Aid from Social-Workers during COVID-19 Pandemic



The community-based culture of Hong Ha Village can be seen as sustainable assets for the tourism development. These can be the structural construction of uplifted-floor houses to accommodate Hong Ha people and their extended families. There are typical ritual festivals, such as:

- Ari Ura (new rice harvest season in December).
- Rupin (or worshipping-ancestor festival) to be annually held by Hong Ha villagers.
- "Di Sim" tradition in which the young ethnic minority couple go through the dating tradition before they can finally have the permission to get their wedding ceremonies.

III. Challenges and Opportunities Brought about by the COVID-19 Pandemic

Until the day this paper is being completed, Vietnam has had 15,325 COVID-19 cases with less than 100 dead cases. The heavily affected areas include urban areas, such as Ho Chi Minh City and the capital city, Hanoi, as well as several industrial parks where FDI companies are doing businesses in Vietnam. Rural areas, such as Hong Ha Village or elsewhere are less affected by the COVID-19. However, villagers are faced with never-seen-before challenges.

3.1. Livelihood of Hong Ha Villagers are Put at Foreseeable Risks

Across Vietnam's regions, communities have been hit hard by the sudden and unprecedented spread of COVID-19 pandemic. Hong Ha villagers are also the case with no exception. In a tight-knit social setting like Hong Ha, women play a crucial role in their daily family activities ranging from money income, caring duties of sick or old-age person or child nurturing. Yet, an overwhelming majority, 87% of the women reported a decline in incomes resulting from COVID-19 pandemic, with growing concerns of rising unemployment and declining demand for products even after the crisis.

Approximately 43% of the women are primary earners in their household, with an average income of US\$ 7 per day. Due to the social distancing and sporadic village-level lock-down, chronic food insecurity disrupts the livelihoods of the most vulnerable people in Hong Ha Village. As mentioned from the beginning, the livelihood of Hong Ha villagers is heavily reliant on the extraction of the forestry products and trading activities with the other neighboring villagers or with Hue City.

3.2. Role of Hong Ha Village Women are Undermined in the Community-Based Culture and Tourism Activities During COVID-19

The women in Hong Ha Village play an important role in every facet of socio-economic life. Majority of people cited that the tourism and homestay services have the ethnic women to take care of the core job functioning and duty assignments, such as receptionists, room cleaning services, master chef food menu and so on. The Hong Ha Village women are the key agricultural producers-cum-providers of the organic foods (i.e. organic vegetables, indigenous

pigs, and chicken) for restaurants at the eco-tourism and homestay services. They also possess the know-how and recipe regarding the making of Aquat cake, soups, and other gourmets which the visitors consider as tasty and the must-taste specialties upon their arrival and visit in Hong Ha.

Figure 6. Hong Ha People Exercising Traditional Dance during COVID-19 Pandemic



While male ethnic people resume the heavy works, such as transportation of agricultural products from the field to family storage, the ethnic women can perform the folklore dance or can sing the indigenous songs and lyrics. Rumors have it that there is only one ethnic woman whose name is Kãn Lôc who is the only person in Hong Ha to keep the folklore songs and ethnic lyrics.

Therefore, it is very important for Hong Ha women to participate in tourism business to preserve its unique cultures and make it known to outside world. On the one hand, they can get extra income for their family, and on the other hand, this is the best way to preserve Hong Ha culture which is at the risk of being faded away because of the quick urbanization and social influences from western cultures.

3.3. Challenges to Meeting the Financial Needs and Health Cares for Hong Ha Villagers

Walking through the Hong Ha Village, the first impression is that the local people are reliant on the forestations of plants for pulp and paper industry, such as the Acacia Auriculiformis, for their financial earnings. Before the COVID-19, Hong Ha villagers had a sound

economic income out of the forestry plant. This plant's cultivated areas account for more than 700 hectares and are considered as an important source of finance for the Hong Ha villagers to reduce the poverty. It would take 3 years for this Acacia Auriculiformis to fully grow and to be ready for extraction.

Hong Ha growers can obtain the revenue of 50-60 million VND (equivalent to USD 1,500-1,650) per hectare if their distance to the market is near. Otherwise, the revenue would be 30 million VND for far-distance plantation of Acacia Auriculiformis. The second core plant is the rubber tree, with the total area of 225 hectares, out of which more than 200 hectares could be put into extraction. It would take 7 years for these rubber trees to be fully grown and ready for extraction. However, storms and cyclones can be problematic for rubber trees.

In some cases, Hong Ha growers had suffered an economic loss of more than 1 hectare over the last year due to strong cyclone and torrential rains. The price for raw rubber material can be 10.000 VND per kg and there is no certainty for it to increase in foreseeable future. On average, Hong Ha growers of rubber tree can have the revenue of 12-15 million VND (equivalent to USD 500-650) per month.

3.4. Sudden Changes in Pattern of Social Interaction and Public Services Bring About Opportunities for Many Aspects

The COVID-19 pandemic has sparked considerable changes in the pattern of social interaction and public services at the village level. The COVID-19 pandemic that occurred in Vietnam had ultimately affected social life in rural areas¹. Rural and remote villagers are faced with sheer hardship more than

The village leaders must do two major tasks simultaneously. The first, they are supposed to prevent the spread of this dangerous virus across their village. The second, they have to work very hard on their working agenda so that a social assistance program can be carried out for effectively dealing with the socio-economic impact of this epidemic caused by the coronavirus.

In doing so, various policy innovations must be carefully thought of and put into implementation by the village leaders to minimize the proliferation of the virus in the village and for the emergency preparedness including social restrictions, physical distancing, and providing quarantine places for people entering the village area. At the same time, the economic activities as well as economic well-being of the villagers must be ensured to revitalize the survival of the entire village population².

The COVID-19 has also put the tourism activities to a standstill, leading Hong Ha villagers to turn their attention to the preservation of the community-managed natural resources such as streams. The clean-up of human created solid wastes in the upstream areas would assist Hong Ha villagers in attracting the domestic tourists from neighboring localities.

3.5. Opportunities for Creation of Village Business Center in Guoil Traditional Hall

COVID-19 has sparked the opportunities for rolling out the network of business consultancy for small-businesses whose owners are Hong Ha villagers. Prior to the pandemic, day-to-day business op-

ever before. This has been forcing the village administration to bump into a difficult situation in which curbing the impact of the COVID-19 pandemic must be dealt with in an innovative way.

¹ UNICEF (2020). 'Rapid assessment on the social and economic impact of COVID-19 on children and families in Vietnam'. Hanoi August 2020.

² Empower and UN environment program (2020). 'The impact of COVID-19 on Rural Women and Enterprises: A rapid socioeconomic assessment in Vietnam by the Empower project'.

erations have been handled by the Hong Ha business owners. Every time when problems have occurred, they are solved by the owners themselves. Furthermore, the outside merchants have little information about their supply chain with Hong Ha villagers because there have been no places for product exhibitions where they would be able to contact the Hong Ha suppliers directly.

IV. Hong Ha Village's Innovations during COVID-19 Pandemic

4.1. Building Up a Digital Village Ecosystem at Hong Ha

In Vietnam, villages like Hong Ha are considered as the grass-root public administrative level. Therefore, the public service innovations play a crucial role in managing its day-to-day operations. The Vietnamese National Assembly (2007) has issued the Legislative Order to implement the grass-root democracy at the village levels³. Furthermore, the scopes of village-level governance have been specified on the Laws 47/2019/QH14, which serves as basic foundations for Hong Ha Village to exercise its public services and functions to the villagers in Hong Ha.

Luckily, before the COVID-19 was declared as a national pandemic, the Vietnamese government has put "National Master Digital Transformation Program" into implementation. The motto of this massive-scale plan is "Digital transformation should go into life, starting first and foremost, at the villages with most vulnerable conditions".

Since July 2020, Vietnam's Ministry of Information and Telecommunication has started rolling out its first smart village plan with three core pillars: (1) building up village digital administration; (2) village digital economy including e-commerce, e-tourism and e-branding at village level; (3) village digital so-

Businesses Villagers Travellers Farmers Old people Tourists Small Social Services Business E-Commerce Digital Village Communication Big Business Tourism Health Services Cooperative

Figure 7. Digital Ecosystem of Hong Ha Smart Village

SOURCE: AUTHOR'S SYNTHESIS 2021

³ National Assembly of Vietnam (2007) 'Legislative Order to implement the grass-root democracy at the village levels'. Issued on 24 April 2007.

ciety which covers aspects, such as digital health care, online education and digital public services. Figure 7 depicts the details of the digital ecosystem of smart village in Hong Ha.

4.2. E-commerce for Hong Ha Village's Product During the COVID-19 Pandemic

The goal of innovation is to drive Hong Ha Village as a public sector organization towards a fast, precise, and productive work mechanism. This is because the public sector is relatively less flexible in dealing with innovation than the business sector. According to a comment of the Vietnamese Prime Minister, 30 percent of the Vietnamese public officials tend to carry out their duties rigidly without any creative innovations⁴.

Innovation is considered as something new, and it is therefore somehow rooted in urban contexts in which dynamic characteristics and technological advances often prevail. However, rural areas are characterized with its different contexts and uniquely cultural settings. Therefore, an anatomy of the rural

innovations at a village level and under the pandemic context are supposed to shed more light on the evidence-based innovation dynamism for policy makers in general and particularly in Vietnam⁵.

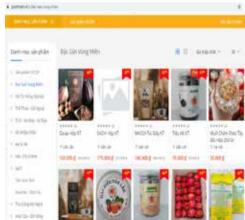
4.3. Strengthening the Tourism to be Ready for Post-Pandemic Recovery

Since 2015 the Hong Ha Village has started the community-based tourism services to meet up with the demand from the outside visitors. There are several favorable conditions for the tourism development in Hong Ha Village. First, it is strategically located right in the middle between A Luoi District and Hue City. Second, there are naturally intact resources such as ponds and crystal streams, namely Parle and Arum. There is also a big hydro-electric power Hong Ha Lake, which is very favorable for eco-adventurous tourism development.

Coupled with these natural endowments, the village also possesses the spiritual resources because of the 300-year spiritual stone tower as well as the ritual festivals often held by Hong Ha people

Figure 8-10. E-trading of Hong Ha Village Agricultural Products on Post-Mart SOURCE: AUTHOR'S SYNTHESIS 2021





Vietnamnet (2013). '30% of Vietnamese Civil Servant did not do their tasks and duties everyday'. https://vietnamnet.vn/vn/thoisu/30-cong-chuc-sang-cap-o-di-toi-cap-ve-107061.html

PEW (2014). 'Evidence-based public policy making: a guide for effective government'.

around the calendar year. Post-pandemic COVID-19 requires that linkages between the tourism products offered by Hong Ha ethnic minority people and the tour package run by the travel companies such as the HGH Travel should be established so that the Hong Ha ethnic minority people could have a chance to tap into this profitable value chain of eco-tourism product and homestay services in Hong Ha village.

4.4. Establishing a Capable Village Administration Structure on Well-Coordinated Linkages Between Villagers and Businesses

Figure 11. Hong Ha People Installing Digital Village Apps



Hong Ha villagers are the bedrock of this structure, especially in times of pandemic. Smart village must have smart villagers who are led by smart village leaders based on smart infrastructure. Therefore, during COVID-19 pandemic Hong Ha villagers have been equipped with smartphones with pre-installed applications such as pandemic-tracking platforms (i.e. BlueZone; HealthDeclarer), a digital banking app for receiving the subsidized payments from Bank of Social well-being and Public Policies, and other social network apps, such as Zalo, Facebook and Viber. These social networking apps have made it easier for Hong Ha Administration to inform the villagers on the anti-pandemic guidance, e-trading on Post-Mart, or

even receiving the aid from central government.

The impact of COVID-19 pandemic also requires the village leaders to be innovating the way they handle the spread of the pandemic with a simple method. For example, to avoid the human congestion in public places, Hong Ha women are given three pieces of different colors, indicating that they are allowed to go to the local markets only 3 times per week. This innovation is originated from the traditional one during the war time. Yet, it seems to be quite effective to curb the spread of the pandemic-prone Hong Ha villagers.

V. Summary and Further Studies

From what has been presented in this case study, it is shown that Hong Ha Village Administration's strategy to cope with COVID-19 pandemic is somehow confined to the Vietnamese government guidance on master plan on digital transformation at the village level. In the COVID-19 pandemic context, the innovative roles of the Hong Ha Village Leaders are three-pronged.

Firstly, the public service innovations are related to the distribution of free masks for the villagers, direct cash assistance from the stimulus funds released by the Vietnamese Government, as well as daily necessities (both in cash and food aid) from various entities or charities.

Secondly, the public service innovations performed by the village leaders have been firmly shaped by the concise implementation and coordinated in the digital village framework initiated by Vietnamese government. Thirdly, the back-bone pillar innovation that the village authorities are crucially tied to is the free 4G telecommunication network throughout the mountainous village terrains. Furthermore, there has been yet a pricing mechanism in support of the villagers in favor of the Post-Mart trading places in terms of tax exemptions. The digital

payments are also quite hard for Hong Ha villagers to handle as well.

World Bank (2021)⁴ indicates that the smart village framework consisting of 3 pillars for policy makers to consider. The first is to catch up with economic opportunities at village level (i.e. sharing economy, digital agriculture, smart finance, smart logistics and E-commerce, business incubation support). The second is to build up the infrastructures and services at village level (education-technology, E-health, smart irrigation, access to clean water and smart mobility). The third is to handle the public governance at village levels (i.e. Digital IDs, affordable technology for the villagers, digital community works and E-justice). It can be seen from the case of Hong Ha that only a por-

tion of those components of World Bank's proposed framework that have been dealt with by the village administration during the pandemic.

Further studies should be centered on the quantitative nature of the research design and its scope. In the short-term, a rapid assessment of the socio-economic impacts caused by COVID-19 on Hong Ha Village should be conducted in order to figure out the urgent needs of the villagers. In the long-term, the studies should be designed on the basis of rural digital village approach rather than the urban perspective.

Lastly, these innovations mentioned in the case study of Hong Ha may not help its villagers to avoid the future pandemic, yet it would lay a concrete foundation for villagers, policy maker, academician, and practitioners to keep in mind the core principles to roll out the smart village innovations in an attempt to mitigate the impacts of the similar pandemics in the near future.

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Rural Development through E-commerce in China: A Case Study of Wuyi County in Zhejiang Province

Sherry Tao Kong

China has been digitalizing rapidly. Its telecommunication infrastructure has been constantly expanded and upgraded and now it boasts a mobile internet user population of 800 million. Digital economy now serves as an engine to China's economic growth and plays an increasingly important role in China's economic landscape. As a prominent part of the development of digital economy, China has grown to be by far the world's largest e-commerce market. This chapter explores the socio-economic implications of e-commerce for rural development in China.

Given its online nature of e-commerce, it offers a particularly attractive possibility to overcome the movement restrictions during the COVID-19 pandemic, and thereby strengthens the resilience of rural economy and promotes social development throughout the pandemic. To better contextualize the discussion, this chapter uses a small, once pov-

erty-stricken rural county, Wuyi, as an example to illustrate the exciting potentials of e-commerce for inclusive development as well as the range of policies that may be devised by local government to enable and facilitate e-commerce development in rural area.

I. Basic Information

Wuyi County is located at the center of Zhejiang Province in the south China. The county spans 50 kilometers wide from east to west, 59 kilometers from north to south, with an area of 1577 square kilometers. It is 26 kilometers from the nearest city, Jinhua, 157 kilometers from Hangzhou, the provincial capital and approximately 350 kilometers from Shanghai, the largest metropolitan of China.

The county has a mid-subtropical monsoon climate, featured with four distinct seasons. The gener-

al weather pattern is mild and humid with abundant rainfall. The average temperature is 17-18 $^{\circ}$ C, the annual precipitation is 1656.2 mm, and the annual sunshine hours are 1407.3 hours. While it is rich in mineral resources, the area of arable land is limited with up to 80 percent of territory being mountainous.

Figure 1. Zhejiang Province of China



Figure 2. Jinhua City as Part of Zhejiang Province



Figure 3. Wuyi County next to Jinhua City



Figure 4. Wuyi County Center



SOURCE: HTTP://WWW.ZJGRRB.COM/ZJZGOL/SYSTEM/2013/01/11/015949090.

Figure 5. Tea Orchard in the Mountainous Area



SOURCE: HTTPS://ZJ.ZJOL.COM.CN/NEWS/1019093.HTML?ISMOBILE-PHONE=1&T=1554156092161

According to the local statistical agency, the total registered population of the county is 345,174 as of end of 2020, of which primarily consist of rural households. Demographically, Wuyi boasts a multi-ethnic demographic composition with ethnic Han as the majority and more than 20 other ethnic groups, including She, Miao, Buyi, and Dong.

Wuyi used to be almost entirely comprised of rural villages where farming was virtually the only form of employment and the livelihood of local residents relied primarily on subsistence agriculture and the meager income generated from farm jobs. After decades of development and industrialization, while administratively, the county remains largely rural, it now consists of 8 county towns, 7 townships, and 3 sub-districts.

As an economy, Wuyi used to be a poverty-stricken county where a large number of households lived below the national poverty line (RMB 3000/person per year, comparable to the USD 1.25/person per day used internationally). The

Figure 6. Rice Seedlings Delivered to Farmers by Agricultural Co-op Staff



county has experienced rapid growth over the past decades and poverty has become a distant past. In particular, as a large share of labor force shifted from agricultural sector to manufacturing and service sectors, average household income has been rising consistently. By 2020, the county's gross product (GDP) was RMB 27.13 billion (USD 4.24 billion), or RMB 78,600 (USD 12,281) per capita.

After years of industrialization development, the structure of Wuyi's economy is currently characterized with booming manufacturing and services sectors whereas agriculture no longer occupies the center stage. The proportion of the added value of the primary, secondary, and tertiary industries in the county's GDP was about 6%, 49%, and 45% of the recent years. The county has now gained reputation for a wide range of local delicacies, including tea, lotus seeds and pears as well as for its inviting hot spring resource. Above all, Wuyi is known for the exemplary track record of its rural e-commerce development. The rest of the chapter first describes the background of such development before zooms in to present the Wuyi case and highlight the policy implications.

Figure 7. Workers tending shihu (Dendrobium officinal), a kind of precious herb used in traditional Chinese medicine (TCM), in the greenhouse of a local production base for TCM



II. The Context of China's Rural E-commerce Development

2.1. General Background of E-commerce Development in China

Against the backdrop of its remarkable economic progress, China has experienced rapid digitalization. Provision of telecommunication infrastructure and availability of fast-speed broadband together with affordable smartphones have led to a transformation in the application of information and communication technology (ICT). From 2007 to 2016, the overall rate of internet penetration in China increased from 16 per cent to 53.2 per cent, surging from 26 per cent to 69.1 per cent in urban areas, and from 7.4 per cent to 33.1 per cent in rural areas (China Internet Network Information Center, 2017).

Along with expansion of internet coverage, the population of Chinese internet users has increased at an average pace of nearly 20 per cent per annum for at least a decade since 2006. By 2018, the total population size of internet users in China reached 828.5 million and broadband networks had con-

nected 378 million households, of which 87.5 per cent were using optical fiber. Alongside this remarkable process, a defining feature of Chinese internet users is their utilization of mobile devices. By mid-2018, 788 million Chinese were using mobile devices to access the internet, accounting for 98.3 per cent of all internet users.

The progress in digitalization in China has strong and widespread implications in both economic and social terms, not the least through e-commerce development (Lin et al., 2016). As a direct result of the expansion of digital networks, and given China's enormous population size, 60 per cent of Chinese constitutes a huge market of consumers, many of whom are ready to embrace the digital world in an enthusiastic and innovative manner. While China was by no means an early starter in the world of e-commerce (with its very first online transaction only completed in April 1998) and a rather slow mover during the subsequent decade (Cao and Zhang, 2009), it has exhibited exponential growth since.

Over the course of past decade or so, the total transaction value of e-commerce in China has achieved a remarkable tenfold growth, from RMB 3.14 trillion in 2008 to RMB 31.63 trillion in 2018 (Xinhua News Agency, 2019). Today, China is home to approximately half of global e-commerce and its total annual e-commerce transaction value has been greater than that of France, Germany, Japan, the United Kingdom, and the United States combined since 2017 (Wang et al., 2017).

During its process of becoming a leading force in global e-commerce, the transaction value of online retail grew sharply. The total value of online sales in China reached RMB 1.89 trillion in 2013—a more than tenfold rise from the modest RMB 130 billion in 2008, surpassing the United States and became the largest e-commerce market in the world for the first time (China E-commerce Research Centre,

2016). Since then, China e-commerce performance has been going from strength to strength. By 2018, the annual online retail sales value reached a staggering RMB 9 trillion (USD 1.4 trillion) and RMB 17.9 trillion (USD 2.8 trillion) in 2020.

2.2. E-commerce Development in Rural China

As an innovative way of organizing productive factors and realize market value of good and services, e-commerce has generated exciting opportunities for creating jobs, increasing household income and fostering skill formation. In particular, with more than 50 million online business owners (as of 2016) and a much greater number of people work in association with digital businesses, e-commerce has demonstrated encouraging potentials for inclusive development in rural China. With the development of information technology infrastructure progresses at an accelerated pace, rural China is well positioned to take advantages of the potentials of e-commerce for inclusive rural development. The value of online retail of rural China has been on the rise consistently over the recent years, from RMB 0.4 trillion (USD 62.5 billion) in 2015 to RMB 1.7 trillion (USD 265 billion) in 2019.

Chinese policymakers identified e-commerce not only as an effective means for general development in rural areas, but also as a useful tool targeting poverty alleviation. The Ministry of Commerce, in partnership with the Ministry of Finance and the State Council's Poverty Alleviation Office, have made continuous effort in promoting and facilitating e-commerce development in rural areas. Special attention was given to the public service provision and logistic network in the countryside so that a circulation that integrates supply-chain, marketing, and logistics can be established to enable e-commerce to flourish in poor regions of rural China.

The comprehensive program led by government

has made considerable progress in advancing rural e-commerce development. By 2020, the number of rural online merchants has exceeded 13 million nationwide and the program has been implemented in a total of 1,466 counties, supported the establishment of more than 2,000 county-level e-commerce public service and logistics distribution centers and more than 130,000 rural e-commerce service stations across the country. In particular, the program has achieved full coverage in 832 state-level poverty-stricken counties and provided training to 1.89 million poor people from poverty-stricken house-holds. The online retail sales of agricultural products in those poverty-stricken counties reached RMB 281 million (USD 43.2 million).

III. The Case of Wuyi

Wuyi County is located in central Zhejiang Province that has traditionally relied on agriculture. Due to its mountainous typography, transportation infrastructure was underdeveloped for a long time and the county was once economically backward and poverty-stricken. In the past, locals would either leave home to work as migrant workers in cities for better pay but endure the hardship of being separated from families or stay to remain as farm labor and live with the grim prospect of economic wellbeing.

Largely thanks to the development of rural e-commerce, things have changed dramatically for people in Wuyi. The place now has turned into a prosperous and dynamic rural destination, proudly claims an annual Gross Merchandise Value (GMV) of nearly USD 2 billion. To be exact, Wuyi is home to six Taobao villages and one Taobao township. In the context of e-commerce in China, Taobao villages are an unambiguous recognition of success.

The official definition of a Taobao village is an administrative village where the total annual value of e-commerce transactions—or gross merchandise volume (GMV)—is no less than RMB10 million (ap-

proximately, USD 1.6 million) and there are at least 100 active online stores or a minimum of 10 per cent of local households are operating online stores (AliResearch, 2016). In short, a Taobao village is a cluster of e-commerce businesses operating in a rural area and Taobao township refers to the congregation of at least three Taobao villages in one township.

The magnitude of change is no doubt mind-boggling. What is more striking is that such changes took place within a course of one and half decade only. This sounds nothing short of a miracle. So, what did the people in Wuyi do to enable the creation of this miracle? How did e-commerce take root in Wuyi and what are the important factors that fostered such development and eventually enabled it to thrive in Wuyi?

There is probably no better time to ask this question, knowing that the flourishing e-commerce has not only brought prosperity to the people, it also helps Wuyi stay afloat even during the worst days of pandemic. The online shops could remain open and they were hit more moderately compared to shopfronts of physical establishment that are directly affected by movement controls enforced to contain COVID-19. In many ways, e-commerce helped Wuyi weather through this double crisis of public health and economy.

Let's take the first Taobao village of Wuyi, Louwang Village, as an example to see how e-commerce development can promote growth and help transform the countryside. Luowang Village has established its reputation as online hub for hardware products. The village is buzzling with the constant flow of logistics and express delivery vehicles entering and leaving the village. The champion who started the sales of hardware was a man named Wang Quan, 43, who is a household name in Louwang Village.

Although a non-local to start with, he is the

undisputable "king of rural e-commerce" in Wuyi County. Wang came from another province after his unsuccessful performance in college entrance examination in 1999. Intending to make a living in Wuyi, he took up a series of jobs, including working as clay worker, a punch worker, a maintenance worker and an inspector.

Later on, he married a girl from Louwang and settled down in the village. With his working experience at the local hardware factories, he had the intimate knowledge of certain types of hardware as well as close connections with the local manufacturers. In 2006, he opened his first online store selling locally manufactured hardware and today he is the owner of three companies, 8 large stores on two major online marketplaces. In addition, he cooperates with more than 20 online distributors and registered his own brand of electric tools in Germany.

With the expansion of his e-commerce business, Wang Quan needed more space, man-power, and capital. He rented the village auditorium as storage space and used it for distribution. He also started office operation on the second floor of the village committee office building to accommodate his nearly 100 employees who are in charge of customer service, after-sales, operation, distribution, packing, and product processing. When he planned to further expand his factory building, the local rural commercial bank engaged him proactively and approved a credit of RMB 3 million (USD 450,000).

Inspired by Wang Quan's success, a large number of villagers have joined the bandwagon of rural e-commerce. Some of them established their own online shops, others joined the workforce of e-commerce businesses, and yet other engaged in businesses that support e-commerce. It has drawn talents from all walks of life participating in e-commerce related businesses: fresh graduates may be busy with website design; returned migrants work as customer service in front of computers; elderly

help out with arranging goods and packaging; retired soldiers teach themselves photography to better promote sales; returned students and farmers form businesses collaboration with the graduates helping farmers sell agricultural products to increase their incomes. For example, Liucheng rural e-commerce branch sells lotus seeds, peach cakes, and sweet potatoes while the new house rural e-commerce branch sells high-quality rice, high-quality vegetables, etc., which are popular with consumers.

To take advantage of the positive spillover effects and economies of scale, Wuyi has made significant efforts to foster the creation of Taobao villages. The county government first identified promising projects in particular villages and provided facilities, such as incubators, to help them take shape. Successful individuals would then inspire others to emulate them and become involved in rural e-commerce.

With the support of the local e-commerce office, the business expanded and a large number of villagers and returned migrants began to participate in other e-commerce activities, bringing genuine returns to the community. Louwang's e-commerce industry is booming. In 2018, its online retail sales were already more than 200 million yuan (approximately USD 30 million). As a direct result, the village is increasingly prosperous, with per capita income of the village reaching more than RMB 30,000 (roughly USD 4500), and half of the villagers becoming car-owners. Louwang Village was also recognized as one of the top 10 specialized Taobao villages in Zhejiang Province.

IV. Policies Devised by Local Government to Promote E-commerce

Over the years, the Wuyi County Government has issued a wide range of policies that created a conducive condition for e-commerce to take root and flourish in the once poverty-stricken villages. A

closer look at the local policies will reveal that most of the systematic policies that actively promote the development of rural e-commerce were crafted and implemented over the past five years. This is in line with the greater importance placed on rural e-commerce by the central government of China. The State Council's 'Opinion on Further Developing E-Commerce and Fostering New Driving Forces of the Economy' provided the defining impetus for subnational—particularly county-level—governments to devise specific policies to promote local e-commerce development.

To better unleash the potential of e-commerce, a number of policy implications can be drawn from the development experiences of Wuyi. While policies rolled out by county-level governments vary from one locality to another, a central element is their compatibility with the existing conditions and their clear focus on rural e-commerce development. From this perspective, a number of aspects may be highlighted in the case of Wuyi County.

First, leadership and accountability are important. The county has purposefully created a workforce to generate the institutional support for rural e-commerce development. A designated organization was established with a full-time staff and authority to craft and implement e-commerce policies. This measure ensured clarity of responsibility and accountability. It also allows for the establishment of a sound network, strong economic leadership and clearly defined work organization. This designated organization would take the lead in launching a county-level network for economic development in the whole province or even in the country, adopting the model of "virtual organization, physical operation" to find solutions to various kinds of challenges.

Second, expertise was provided by inviting independent experts to advise on professional grounds. The county government invited external consultants to draft five-year plans for the development of

Wuyi's e-commerce. The expertise of independent professionals provided valuable guidance over the strategies for and direction of e-commerce development.

Third, the county government offered a range of supports for e-commerce startups. For example, it allocated RMB 15 million as an annual grant to fund e-commerce activities, while an e-commerce service center and association and e-commerce industrial parks were established to lend support to online businesses. Another example is the local government organizations strived to improve village-level e-commerce service capabilities.

The local supply and marketing cooperatives actively introduce modern information technologies to digitalize rural entity outlets such as chain supermarkets, convenience stores, and service centers. In addition, efforts were made to upgrade the conventional formats of logistics so as to better integrate online business model, especially the key features of e-commerce, such as distribution, logistics, and electronic payment.

Fourth, to shape a positive perception of e-commerce and encourage greater participation, the county government mobilized the media and organized numerous public events to popularize the idea of e-commerce, promote entrepreneurs and create a favorable environment for related innovation. The relevant departments and media units jointly opened up a column of "Entrepreneurship and Innovation by All" to generate more publicity for entrepreneurship and innovation. In the past, hundreds of reports have been reported. The government also held the "Internet +" entrepreneurship and innovation competition and events, such as the "Top 100 Rural Champions", which attracted a large number of e-commerce companies to participate.

Fifth, to build a coherent policy package, the Wuyi County Government established a coordinated service mechanism, including township and vil-

Figure 8. Wuyi was granted the award as one of the Top 10 counties that promoted rural development through e-commerce

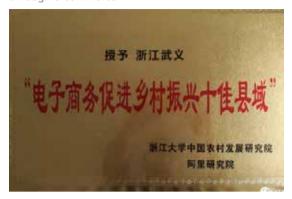


Figure 10. Local marketing center for promoting sales of local produce on e-commerce platforms



lage-level governments, so e-commerce businesses can receive support at all stages of development. For instance, one county-level logistics center is in Wuyi and an additional 18 township-level branches and 398 village-level service stations have spread to all corners of the county, forming a network to facilitate the operation of e-commerce.

Concerted efforts are also crucial for e-commerce to make economic sense. Logistics, warehousing, transport, and internet connectivity are particularly important for underdeveloped rural areas. Only by effectively reducing the costs of trade can the benefits of access to the entire domestic market through online trading platforms be realized. Lastly, training, education, and funding support are needed for the above-mentioned policies to be effective. To this end, governments at all levels will

Figure 9. Local official receives recognition for developing an incubation base for returned migrant workers



Figure 11. Wuyi's First Taobao Village: Louwang Village



need to be decisive and innovative in crafting policies to address the shortage of talent and funding for rural e-commerce development.

V. Summary and Discussion

Wuyi County has been a shining example of China's rural e-commerce development. Through a host of policies and strategies, Wuyi has transformed and upgraded its e-commerce villages, and created entrepreneurial incubation bases for returning villagers. Wuyi government seems to have found effective ways to foster and accelerate the development of e-commerce successfully and it has made efforts continuously to upgrade its e-commerce villages.

Led by the County Economic and Commercial Bureau to transform since 2016, Wuyi established entrepreneurial incubation base in early 2018 and have produced three new Taobao villages since. Among them, two have leaped from the formerly poverty alleviation villages to become flourished e-commerce clusters. Wuyi's remarkable achievement also led it to win recognition as the National "Excellent Case of E-Commerce Promoting Rural Revitalization".

Given time, the pandemic will eventually abate, and focus will be given to the recovery of the economy and the society. It is hoped that the experience and policy lessons summarized in this chapter can serve as an inspiration for rural villages to embark on a journey of development through e-commerce development.

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Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era

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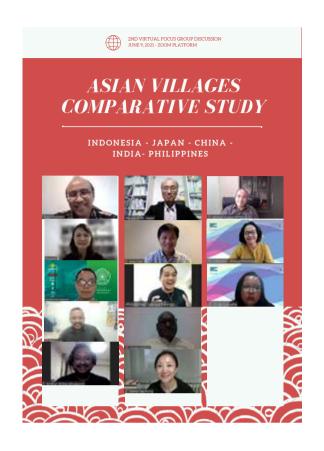
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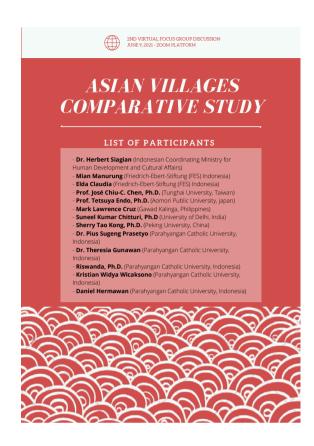
Asian Villages Comparative Studies: Challenges and Opportunities in Pandemic Era

Appendix





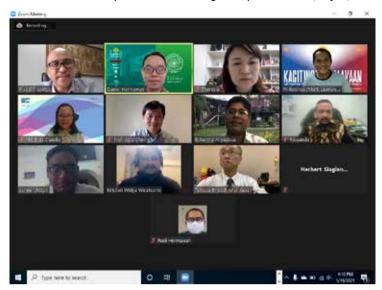


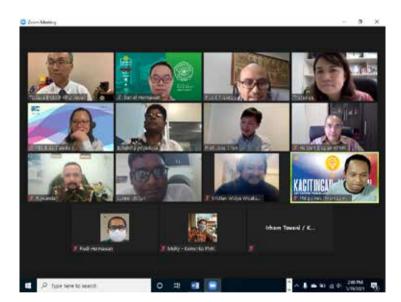


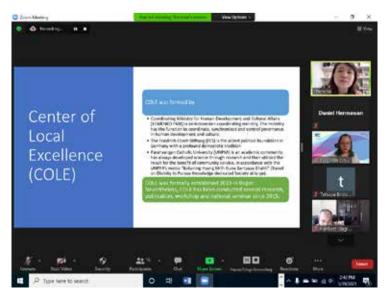


Documentation - Screen shoot Focus Group Discussion

1. 1st Virtual Focus Group DiscussionAsian Villages Comparative Studies, May 19, 2021







2. 2nd Virtual Focus Group Discussion Asian Villages Comparative Studies, June 9th 2021.







3. $3^{\rm rd}$ Virtual Focus Group Discussion Asian Villages Comparative Studies, June 30, 2021



