Village public innovations during COVID19 pandemic in rural areas: Phenomena in Madura, Indonesia

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Abstract: This research was driven by the innovation kebijakan publik and adaptation process to new habits during the COVID19 pandemic in villages in Sampang Regency. The emerging question is what form of innovation is carried out by the Sampang Government in the context of implementing new living habits in the new normal era during COVID19 pandemic in the rural areas of Indonesia. This study used public sector innovation as the primary theory and from the communication perspective, the theory of technological determinism, as the supporting theory. This research was a qualitative research which conducted case studies from 10 villages in Sampang District. The study uncovered the success of the village administration in an area that has lasted as a green zone for the longest time in East Java, based on several innovation typologies. The first typology, product innovation in the distribution programme for Direct Cash Assistance—Village Fund (BLT-DD), distribution of free masks prioritas kebijakan pengadaannya dari pen-grain desa masing-masing, distribution of essential food packages from program pemerintah dan inovasi dompet desa berasal patungan penghasilan pribadi perangkat desa, and establishment of free internet networks for village residents. Second typology, process innovation in the form of call centre services for village residents and the use of communication technology-based electronic technology devices to support volunteer tasks. Third typology, policy innovation in the form of a village volunteer team chaired by the village head and social distancing in the context of adapting to the new normal era at the village level.

Subjects: Rural Development; Rural Studies; Social Work and Social Policy; Community Social Work

Keywords: innovation; village head; pandemic; cOVID19

1. Introduction
The COVID19 pandemic that occurred in Indonesia had ultimately affected social life in rural areas (Abidah et al., 2020; Dinarto et al., 2020). The village administration is facing a difficult situation related to controlling the impact of the COVID19 pandemic. The village head had to do two major tasks at once. The first, trying to prevent the spread of this dangerous virus and second, working on a social assistance program to deal with the socio-economic impact of this epidemic caused by the coronavirus. The various policy innovations made by the village head as a preventive measure to minimise the proliferation of the

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This paper discussed innovation from village head and adaptation process to new habits during the COVID19 pandemic in villages in Sampang Regency, Indonesia. The recent innovation shows policy innovation in the form of a village volunteer team chaired by the village head and social distancing in the context of adapting to the new normal era at the village level.
virus in the village as well as emergency preparedness including social restrictions, physical distancing, and providing quarantine places for people entering the village area.

In the atypical situation, due to the pandemic, the Sampang Government should be more aggressive in making innovations to ensure that the policies made for COVID19 mitigation are prompt, uncomplicated and unproblematic. The goal of innovation is to drive the village as a public sector organisation towards a fast, precise and productive work mechanism. According to Soewarno, the public sector is relatively less flexible in dealing with innovation than the business sector. The public sector’s reluctance to take advantage of innovation is closely related to its history and characteristics that tend to be static, formal, rigid, and prioritising comfort, upholding status-quo, and disliking change. In general, officials involved in the public sector only carry out their duties and functions with mediocrity or “business as usual” (Arifin et al., 2020; Suwarno, 2008).

Innovation is an idea, action, or item that is considered new. Innovation is usually closely related to urban areas with dynamic characteristics and technological advances (Budiyanti et al., 2020). Meanwhile, rural areas are often left behind, closely associated with traditional communities with a more straightforward division of labour specialisations (the majority of which are farmers), and less demanding for transformation. This phenomenon is in accordance with Durkheim’s analysis of the characteristics of human ideas development from the mechanical solidarity stage with a simple division of labour, to organic solidarity with a complex division of labour (Martono, 2012). When humans are able to create technological innovations, they need special skills to operate these products. So, the more complex technological developments are, the more divisions of labour are in society (Martono, 2012).

In this study, the authors focused on elaborating on innovations in rural areas of Sampang because it is the most successful regency to maintain the green zone for the longest time (no positive confirmed cases) in East Java Province. The Sampang government explained that in a total of 14 sub-districts, six sub-districts and 180 villages, the first positive case was recorded on 13 May 2020. This research took the location of 10 villages that still maintained the green zone or there were no positive cases for the period March to May 2020. The Regent of Sampang, Slamet Junaidi, clarified that the success of keeping
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Sampang Regency in the green zone in East Java could be achieved because his administration continues to take drastic measures and impose restrictions on the entry and exit points of Sampang residents (Regamedianews.com, 2020). Regarding the development of data on the spread of the COVID19 virus in Sampang Regency, as of 9 September, there were 237 positive cases and 10 suspected COVID19 cases (look at the Figure 1).

Based on the research location’s geographical location, nine villages are far from urban areas, only Panggung village is considered close to urban areas, which is less than 5 km from the centre of the Sampang government. The majority of the villagers’ profession is farmers, especially for Disanah village who work more as fishpond farmers and one of the complaints of the village head of Disanah is that the area has difficulty getting a cell phone signal. Meanwhile, there are no problems with the internet network and signal from cellular phone service providers in other village areas. From a religious aspect, most of the villagers embrace Islam so that there are many educational facilities based on religious schools known as pesantren. During the pandemic, many activities identical to the pesantren tradition were eliminated because of the potential to gather the masses. This is based on the village government’s agreement with religious leaders who lead Islamic boarding schools as an effort to prevent the COVID-19 pandemic outbreak.

The satisfaction of village communities with the village administration in handling the COVID19 pandemic will increase if health complaint services can also be faster. For example, the village administration could adopt the concept of business organisation in public services, better known as new public management (NPM). Reform of public organisations on the principle of NPM (reinventing government) can increase the flexibility of village administrations in facing changes in global society due to pandemics, thereby increasing the effectiveness of administrators and government leaders (Gaebler, 1993). Hierarchically, village heads tend to be more active in realising COVID19 prevention programmes if they are instructed by their bureaucratic supervisors, for example, the district head, regent, and so on. Meanwhile, as an informal elite, the village head must develop more of his own initiatives (Vetter, 2020). For example, during the pandemic, innovative leadership is urgently needed for the safety of village residents and rebuilding of the village economy. Thus, the village head also acts as an informal leader who is not tied to a certain level of authority, but more integrated into traditional measures as a protector for the village residents (Prijono & Tjiptoherijanto, 1983; Rosete, 2020). The role of village protector is primarily aimed at minimising casualties from village residents and inhibiting the potential for the pandemic to spread in the village.

A village head must optimise all communication channels in the pandemic situation, including those based on electronic devices and social media. One example of post communication technology innovation is the use of the traditional “kentongan” tool to convey warnings to village residents. However, in this era, village heads can implore village residents to care about and stop the spread of the virus using social media (Website, WhatsApp, Facebook, Twitter, and Instagram) and non-social media (letters, banners, billboards, and loudspeakers). This change in communication culture from traditional tools to modern tools is consistent with MarsPagel McLuhan’s notion that changes in communication technology will inevitably result in profound changes in cultural and social structures (Baran, 2012; Bertho-Lavenir, 2006).

Improving public services to be prompter and less complicated requires innovation from a village head, especially in the pandemic situation like today. It is in accordance with Muluk (2008) who believes that innovation remains relevant in the public sector because of its alternative function, which is to find new solutions to old problems that are yet to be finished. Innovation is also an instrument for developing new ways of utilising resources and meeting needs more effectively. It can also be used to develop strategies and actions in public services (Khitam et al., 2020). There are several levels of innovation that reflect the variation in the magnitude of the impact caused by ongoing innovation. These levels are incremental, radical, and transformative (Muluk, 2008).
Public service innovation can be considered successful if it is the result of the creation and implementation of service product innovation, service process innovation, service method innovation, policy innovation, and system innovation. First, product or service innovation is a change in the form and design of a product or service. Second, process innovation is continuous quality renewal and refers to the combination of organisational changes, procedures and policies needed to generate innovation. Third, innovation in service methods is a change in terms of interaction with service users, new ways of interacting with service users, and new ways of service. Fourth, innovation in strategy or policy is a change in vision, mission, new goals and strategies and their reasons for departing from existing realities. Fifth, system innovation is a system interaction that includes new or updated ways of interacting with other actors, or in other words, changes in governance (Mulgan & Albury, 2003; Muluk, 2008).

Furthermore, in relation to the relationship between innovation and public services, Holverson and Thomas suggested six typologies of innovation in the public sector, namely; (1) A new, improved service, for example, education services, public health services; (2) Process innovation, for example, changes in the process of providing services or products; (3) Administrative innovation, for example, the use of new policies as a result of policy changes; (4) System innovation, which is a new system or a fundamental change from an existing system by establishing a new organisation or a new form of cooperation and interaction; (5) Conceptual innovation, is a change in outlook, for example, integrated management, or mobility leasing; (6) Radical change is a shift in the general view or mental change of government agency employees (Basuki, 2018).

After the 1998 reform in Indonesia, the public sector lived in a more complex open system. In this era, innovation in the public sector is important because of the opportunities for competition between regions (including villages) and between public institutions (Muluk, 2008). Village-level public sector innovations solve various health, economic, and social problems due to the Covid-19 pandemic. Village governments that have successfully handled the Covid-19 pandemic can directly strengthen the legitimacy of the village head’s power because the position of village head is through direct election mechanism. Implementing the village democratic process gives the village head the authority to determine who the village apparatus is. Thus, innovative and solution leadership models are one of the resources that can strengthen the legitimacy of modern leaders at the village level or public sector organisations.

Based on the previous explanation of the concept of public innovation, this article examined the innovation process carried out by the village administration in the new normal life at the village level. It is important because currently, the village administration is facing the threat of the COVID19 virus pandemic. Several previous studies on innovation in the rural context in Indonesia included Subekti and Damoyanti (2019) who argued that current village innovations are trying to adopt a smart village model, which is a derivative of a smart city. A study in Sunankerto Village, Malang Regency, concluded that the application of smart village in the development of tourism villages was still not optimal. It can be seen from the lack of use of technology, resulting in a narrowing of the meaning in implementing the smart village model so that it becomes limited to the use of social media for village promotion events. Furthermore, Nursetiawan (2018) examined the implementation of innovation in village-owned enterprises (BUMDes). The focus of existing innovation is based on the potential in the realisation of a village’s independence, namely economic potential, social potential, and human resource potential. Economic potential requires information technology innovation to develop BUMDes businesses. Meanwhile, social potential and human resource potential includes the availability of competent and skilled workers from village communities. Research from Puspita (2018) on innovation in village administration budget management through village finance applications, namely e-village budgeting in Sembulung Village and Jajag Village, Banyuwangi Regency found that the implementation of e-village budgeting makes managing village funds easier and more accountable because of the automatic financial results from the system application.
Based on the results of the previous study, it is evident that there has been no research targeting the form of village administration innovation in the current situation related to the COVID19 pandemic. Thus, this article offers a novel study from an empirical aspect, namely the issues discussed tend to be new (the COVID19 pandemic). In contrast to previous studies, for example, Nursetiawan (2018) examined innovation in village-owned enterprises (BUMDes) in order to increase village community income through BUMDes. In other studies, Puspita (2018), and Subekti and Damayanti (2019) are more inclined to analyse the role of using information technology for village governance and the development of the concept of a tourism village. Whereas in this article, because currently, the village head is facing the threat of the COVID19 pandemic, all focus on innovation kebijakan publik in a village scope is prioritised for services for village residents in new normal living conditions. Thus, the authors proposed a research question, namely, what form of innovation is carried out by the village administration in the context of implementing a new social life in the COVID19 pandemic situation in rural areas.

2. Method

This article used a qualitative method with a case study research type. The purpose of this study was to describe the actions taken by the village administration, especially the innovation strategy in relation to COVID19 pandemic mitigation in the village. The innovations referred to in this research were policies for village residents affected by the pandemic. This study was conducted in Madura Island, East Java Province, precisely in Sampang Regency. As discussed in the previous section, Sampang Regency is a unique area because it was the region that held the longest-held green zone status (free of COVID19) in East Java province.

Identification of barriers to implementation and innovation of public policies for the 10 villages that were the objects of research based on these villages’ characteristics. Based on the recognition of the majority of the informants, the profession is farmers, so education on various policy innovations must be optimal. It can be seen in several cases that various policy innovation products are ineffective if only the socialization model is through an announcement or circular letter from the district head or village head because these peasants must be given a direct information of the latest programmes of the village administration. Moreover, the average level of education for villagers is still low so that awareness of the dangers of the Covid-19 virus is still lacking. This, according to most village heads, admitted difficulties in educating knowledge and understanding regarding innovative programmes during the Covid-19 pandemic conditions.

Another consideration in the selection of Sampang Regency was to facilitate the data collection process during the research period. This notion is in accordance with Bodgan and Steven J. Taylor. First, the location must be relevant to the substance of the research, and there are substantive, theoretical problems that can be researched. Second, there must be a person on site who acts as a “gatekeeper”. That is, there are adequate subjects and informants at the research location to assist in the research. Third, the research location is easy to visit or frequently visited. Fourth, researchers were welcomed better at that location than other locations. Fifth, in the research location, there are interesting problems to research and are relevant to the research theme, namely innovation and new normal life during the pandemic in the village (Taylor et al., 2015).

Data were collected using interview techniques by selecting specific informants to obtain relevant primary data. The selected informants were 10 village heads in Sampang District. Meanwhile, secondary data come from the official website of the Sampang Government: sampang.go.id; COVID19.sampang.go.id, and the official social media accounts of the Sampang Regency Government. The additional secondary data came from local media covering the COVID19 pandemic, namely regamedianews.com and newspapersmadura.com. The informants’ data is presented in Table 1.

Some of the informants above are related parties who know the main problems during the Covid-19 pandemic in their respective village areas. In determining informants based on specific
| No | Name         | Village Head | Education Background | Sex | Age (years Old) | District |
|----|--------------|--------------|----------------------|-----|-----------------|----------|
| 1  | Abdul Hamid  | Jelgung      | Senior High School   | Male| 41              | Robatal  |
| 2  | Zainuddin    | Bepelle      | Senior High School   | Male| 35              | Robatal  |
| 3  | Maruki       | Noreh        | Senior High School   | Male| 67              | Sreseh   |
| 4  | Siban        | Disanah      | Senior High School   | Male| 51              | Sreseh   |
| 5  | Musleh       | Labang       | Senior High School   | Male| 34              | Sreseh   |
| 6  | M Siri       | Rapa Look    | Senior High School   | Male| 52              | Omben    |
| 7  | Holid Mawardi| Napo Daya    | Senior High School   | Male| 32              | Omben    |
| 8  | Muarif       | Taman        | Senior High School   | Male| 45              | Jrengik  |
| 9  | Purnomo      | Miakah       | Senior High School   | Male| 42              | Jrengik  |
| 10 | Subaidi      | Panggung     | Senior High School   | Male| 42              | Sampang  |

Source: Research Data (2020)

criteria, the categorisation is the informant's status as the village head. Initially, 23 villages were the target of the research location. However, in its development, the author only interviewed 10 village heads; the rest were not willing to be interviewed by researchers. Furthermore, due to the pandemic situation (restrictions on foreigners entering the study location village), the data collection process used interviews via telephone.

Furthermore, the profile information is presented to increase the accuracy and validity of this study. Validity in qualitative research is related to description and explanation. In other words, was the informant's explanation credible? It is for this reason that confirmation from village head actors is urgently needed (Denzin & Lincoln, 2011). In general, the steps that can be taken to maintain and increase reliability in qualitative studies are research and triangulation settings (Moleong, 2017). Triangulation checks the validity of data by utilising things other than data for checking or comparison, for example, triangulation of data sources, data collection techniques, time, and theory (Denzin and Lincoln (2011), Moleong (2017), and Salim (2001)). This research was started in March 2020 and ended in August 2020. The validity testing process was carried out to recheck the findings with other data sources, namely observational data with interview data, and interview data with other documents, including supporting theory.

The research data processing stage was the process of analysing data from various sources, namely interviews, and secondary data in the form of online news, Sampang official website documents, notes, pictures and others. The first step in data processing was data reduction or selection to comprehend the relevance of existing data. The second step was to categorise the data based on specific marking (coding). The third step was to check the validity and interpretation of existing data. The steps taken by the researchers were in accordance with the opinion of Miles and Huberman (1994) that the data analysis process consists of three streams of activity that co-occur, namely: data reduction, data presentation, and conclusions drawing or verification.
3. Results

The COVID-19 pandemic in Sampang has changed the pattern of social interaction and village bureaucratic services. For example, the application of several health protocols in the residents’ daily activities. These alterations require the role of village administrators in monitoring residents’ compliance with health protocols and attempting to minimise the spread of the virus. Public services also experience a change in their habits of serving people due to normal conditions. This pandemic situation urges the presence of policy innovation as a form of commitment of public administrators’ increasing responsibility to citizens, increasing public authority to participate in policy decisions, and increasing benefits for residents (Elena & Constantin, 2013). In The Indonesian Law Number 6 of 2014, the responsibility to citizens is shown in the public services provided by the government. The increase in public authority in decision-making is shown in participation in discussions on development. The increase in the benefits of policies for the community is shown by an increase in community welfare (Irawan, 2017).

Innovation in the public sector is essential in the pandemic situation in order to find solutions to adapt to a new life (new normal) in rural communities. The primary goal is a condition in which the village residents can return to their daily activities, work and worship normally, but with the new social life design which adheres to established health protocols. Various mandatory health protocol standards for welcoming the new normal practice have been prepared by the village administration, including innovative village bureaucratic services to provide excellent public services, as well as to save the lives of village residents. Thus, the village administration urges the village residents to adopt a healthy lifestyle, for example, understanding of the relationship between hand hygiene, masks, sanitation and health. The presence of several new normal policy innovations is in accordance with Lewin’s notion that the change in the new bureaucracy to a new normal is an external force demanding to make changes within the bureaucracy (Taufik & Warsono, 2020).

As mentioned in the previous discussion, during the Covid-19 pandemic, the Sampang government’s policies were continued by the village government. The village head is responsible for making policies fully effective and on target to maintain the Sampang area’s green zone status. The policy implementation process requires innovative ideas, namely procedures, new strategies, and finally, the latest service products. Several types of public policy innovations empirically in 10 villages in Sampang consist of various types. First, product innovation. The distribution of masks, which is a new procedure, must prioritise masks from local village artisans. The product of direct village fund cash assistance (BLT-DD) according to the target must be realised before Eid day so that several villages created a new strategy with a cash disbursement model or not through bank accounts.

Meanwhile, for basic needs assistance (groceries), the conditions are very limited if it relies on government programmes. Several villages created a new idea of raising social funds from individual village officials’ income called the village wallet. The private donation funds are used for basic needs assistance for villagers who have not received assistance packages from government programmes. Second, service process innovation, namely the expansion of free internet services (wifi) and the establishment of a post by Covid-19 volunteers. Some of the innovations that have been used by the volunteer team are telephone and internet-based rapid response call centres. Besides, the volunteer team’s work innovation also changed traditional communication devices (kentongan) with electronic loudspeakers (sound systems) at every village guard post.

As explained previously, the village administration has formal authority in the decision-making process of all new normal era policy innovations. The important figure in the majority decision-making process is the village heads. They are indeed the extension of the power structure of the sub-district head and the district head. In addition, the village heads hold a critical position as a patron or “Bapak” for village residents. Consequently, they should develop more initiatives for new ideas to protect the village during the pandemic situation. The main aim of these village heads was to create better public policies. Thus, specific innovations that correspond with the realities faced by rural communities are urgently needed. These innovations should emphasise
new policies that lead to the fulfilment of the fundamental rights of rural communities in the pandemic situation, for example, health care programmes and social assistance programmes for rural communities. Based on the concept of public sector innovation theory, the typology of innovation in the context of new normal social life in rural areas includes service product innovation, service process innovation, and related policy innovation (Mulgan and Albury (2003); Muluk (2008)). Next, the authors also emphasised what the village administration has done in the context of policy innovations on handling COVID19 in Sampang.

4. Discussion

(1) Product-Based Policy Innovation

Researchers found that service product innovations to aid village residents in rural Sampang during the pandemic could be grouped into two models, which were social assistance products and health products. For innovative health service products, the village administration distributed free masks to village residents. The Sampang Regent urged the village head to procure and mandate the use of masks for made by local makers in each village. In the condition where there were no mask makers in a village, the village heads could procure from another village, provided the villages are still located in the same sub-district. This policy was made because wearing a mask is one of the most effective ways to prevent diseases, especially the coronavirus which cause the COVID19 pandemic. The village administration and volunteers aggressively conducted socialisation with village residents to ensure that they have sufficient knowledge regarding the importance of wearing a mask and the relationship between masks and health.

On average, every villager was given a minimum of two cloth-based masks that can be rewashed repeatedly after each use. Based on recorded data from the Sampang Regency Central Bureau of Statistics in 2018–2019, the total population of 10 villages studied in this research was 40,187 people. Hence, the number of mask products distributed to village residents, two masks per individual, totalled to 80,374 masks. Not only the emergence of innovative health products by wearing masks to save as many lives as possible, but COVID19 pandemic also affected rural areas in finding ways to help village residents who were categorised into vulnerable economic groups. The village administration allocated a budget for several social aid program, as the number of village residents who fell in the poverty line increased as a result of the pandemic. Table 2 table exhibits the realisation of Direct Cash Assistance-Village Fund (BLT-DD) in the third phase of August 2020 in Sampang Regency.

Referring to the data in Table 2, the highest number of BLT-DD recipients was in Jelgung village, totalling 271 recipients. On the other hand, the lowest number of BLT-DD recipients was in Napo Daya and Taman Villages, with 150 recipients each. From the data obtained, the researchers found that the largest percentage of recipients based on the number of households in Sampang Regency area is Disanah village, 83% of the 236 number of households were BLT-DD recipients, amounting to 196 households. Meanwhile, the smallest percentage of recipients in Sampang Regency was Noreh Village in which 15% of the village household population or 240 out of 6171 received the cash assistance. Family Card (KK) is a family identity card containing data on the composition, relationship and the number of family members. The government distributed BLT-DD assistance targeting per beneficiary family (KK) so that the calculation of the proportion of BLT-DD recipient coverage was more relevant when comparing the number of family cards. Thus, the benchmark for the number of BLT-DD recipients in each village was the data on the head of the family for each KK. Therefore, one KK could not have multiple BLT-DD recipients.

The BLT-DD distribution process in Sampang was carried out in two ways, namely in cash or by transfer to a bank account. In both cases, the village head is fully responsible for the data on which households are entitled to receive BLT-DD assistance. In selecting the household to accept BLT-DD during COVID19 pandemic, the village heads are guided by specific regulations, namely the Regulation of Ministry of Villages, Development of Disadvantaged Areas, and Transmigration No. 6 of 2020 concerning the priority use of village funds. The villager residences who were entitled to
receive BLT-DD are low-income families who were not registered as recipients of the Family Hope Program (PKH) or Non-Cash Food Assistance (BPNT), who were losing their livelihoods due to Covid-19 pandemics, and/or had family members that were prone to chronic illness.

Another product innovation during the pandemic was food aid. All village heads and informants revealed that they distributed essential food assistance given by various parties, including the East Java Provincial Government for the arts community, the Sampang Regency Government for Indonesian Migrant Workers (TKI) who returned to Sampang, and other private sectors. Nevertheless, the majority of village head informants criticised that the quantity of essential food package assistance from both the government and the private sector was still relatively small because the recipients were only limited to a small number of village residents. Therefore, some of the village heads also used their private funds to procure essential food assistance for their respective residents.

(2) Process-Based Policy Innovation

The village administrations had also made service process innovations in implementing COVID19 prevention and control measures. The village head established an information centre (call centre) to monitor the movement of newcomers entering the village. Another function of such call centre was to report if there are village residents who were experiencing symptoms of illness identical to the COVID19 symptoms. These residents may report their conditions to a telephone number listed as the village call centre. This is important because communication is the process of conveying messages from village resident sources to recipients of village authority. Thus, such communication was the transfer of information from sources in the hope that the recipient would respond quickly to any pandemic-related situations in rural areas of Sampang Regencies. The communication channel is a means of conveying important messages to the recipient. Based on the statements of the village head informants, there were two types of call centres to facilitate communication related to pandemic situations in their villages. For example, some village heads only include their cellphone number as a call centre to accommodate reports of symptoms of illness. Another case was an internet-based information centre through the WhatsApp (WA) group provided by the village heads.

In addition to the information centre (call centre), the researches also found another innovation on the village administration service process, which was the formation of village volunteer teams whose main task was to assist village heads in handling the COVID19 pandemic. For example,
volunteers collected data on people entering Sampang Regency from other cities, especially those who came from the red zone. Based on the village head’s statements, the volunteer team coordination centres were established in each village Pagel to make it easier to facilitate coordination with the village administration regarding the development of the COVID19 response in the village. The village head also revealed that the volunteer team operational funds were allocated from Village Funds (DD) and Village Fund Allocations (ADD). In addition, the volunteer team helped to conduct outreach to village residents about health protocols during the pandemic, namely distributing masks, building handwashing stations at various locations in the village, and spraying disinfectant liquids at village public facilities.

On the data related to the accumulated distribution of the number of identified coordination centres and volunteers, researchers found 10 village areas, as exhibited in Figure 2. In this picture, it can be seen that the village with the highest number of volunteers and the COVID19 coordination centres is Jelgung village with a total of 30 volunteers and 12 posts. Disanah village followed in second place with nine posts and four volunteers. Similarly, other villages had at least 10 volunteers and one main coordination centres in each village Pagel. Based on data on the number of posts and volunteers, it shows the village government’s seriousness to maintain green zone status or not to have positive cases of Covid-19. According to the information of all informants during this research period, the village government’s quick response seems to be successful, namely March to May 2020, and there have been no cases in 10 villages. Also, the supervision of the Sampang district head is running quite well. For example, the regent every night goes around to the posts randomly to each village so that the post and volunteer team are always on standby to anticipate the spread of Covid-19 and sudden inspections by the Regent of Sampang. As a consequence of the regent’s close supervision, village heads must often innovate in implementing policies for handling the Covid-19 pandemic. As an example, the village head as the leader of the volunteer team made service process innovations in the field of communication. The researchers found that such development of communication technology gave birth to electronic media in rural communities, thus prompting the rise of electronic device-based process innovations to prevent the spread of the COVID19 pandemic.

Based on the statements of one of the village head informants, the presence of electronic media made it easier for the volunteer team to work together and communicate with village residents. For example, in the past, the village community used traditional “kentongan” tools (made of bamboo) to convey emergency information to all village residents. During the COVID19 pandemic, the village heads forbade mass gatherings which gave way to renewed service process innovation. Every village coordination centres used modern electronic devices in the form of a sound system loudspeaker. The function of the sound system was to communicate with residents about the
importance of maintaining physical distancing between individuals and implementing new life habits based on health protocols. In addition, electronic loudspeakers can also be used as a more early modern warning tool in order to restrict criminal acts in the village. Other process innovations based on other electronic devices at the coordination centres of Jelgung village, Panggung village, Rapa Laok village, and Napo Daya were the use of handy talkies (HT). This tool assisted direct coordination between village volunteer groups and the village authorities, such as the village heads or village officials.

(3) Policy-Based Innovation

The village administration implemented a physical-distancing policy whose primary goal was to prevent COVID19 transmission in the village. The policy in the physical distancing model is defined as restricting physical contact as measures in non-pharmaceutical infection control aimed at stopping or slowing the spread of infectious diseases. The main objective of this restriction policy was to reduce physical contact between infected and uninfected people, to minimise the transmission of diseases, viruses, morbidity, and other harmful consequences that can lead to fatal consequences (Kresna & Ahyar, 2020). Meanwhile, social distancing is the limitation of certain activities of residents in an area suspected of being infected with a disease and/or contaminated to prevent the possibility of spreading such disease or contamination. Social distancing was aimed to limit people's social activities to limit physical contact and crowds. According to social distancing policies, one is not allowed to shake others' hands and always pay attention and maintain a distance of at least one to 2 m when interacting with others, especially with someone who is sick or at high risk of suffering from COVID19 (Kresna & Ahyar, 2020).

The village administration has also made a smart village policy innovation, namely free internet access, which was available in the village. Each village has a main tower capable of transmitting a wifi signal so that all corners of the village can enjoy internet services. Free internet products were beneficial during the COVID19 pandemic, mainly because the village administrations were intensively conducting virtual hospitality events to prevent village residents from visiting families in Sampang Regency during Eid al Fitr, especially those from the red zone areas. Almost all wifi network developments were located in their respective village Pagels because according to the applicable laws and regulations, the construction of internet infrastructure must be built on village treasury lands or in public places. It must not be built around the private residence of the village heads. Meanwhile, the strength of the wifi signal coverage is quite varied; some can reach the whole village due to supporting towers in each hamlet. Others provide wifi that can only be accessed around the village Pagel. The village head stated that the free internet policy funds for the smart village program were allocated from each village funds.

Some information can be inferred from Figure 3 above. Among them was the number of active wifi signal transmitters and the signal quality in 10 villages in Sampang Regency. There were four villages which belonged in good signal quality, namely Jelgung village with a total of five wifi, Napo Daya village with a total of four wifi, Taman village with a total of four wifi, and Disanah village with a total of three wifi. Four villages only have one wifi transmitter with low signal quality were Bapelle village, Noreh village, Mlakah village, and Panggung village. Finally, there were two villages whose wifi signal transmitters were not functioning at all, namely Labang village and Rapa Laok village. This situation proved that policy innovation in the form of free internet network infrastructure development program was still not evenly distributed in all villages of Sampang Regency. There were several villages whose internet network was able to reach the whole village. On the other hand, there were several villages whose internet network was not functioning at all.

The construction of a wifi signal transmitter tower facilitates villagers’ activities such as online learning and supports village government policies that prohibit villagers outside Sampang from going home during Eid holidays. As previously explained, a new policy innovation for migrants is to use virtual-based friendship rather than going home or face-to-face. Regarding free internet
Figure 3. Development of wifi and signal quality in ten villages in Sampang.

infrastructure, sometimes the free internet wifi signal network is not acceptable in some villages, but it can be useful for less fortunate villagers who need a free internet network. The exciting thing is that with the free internet network’s construction, the village hall is quite busy with villagers using the free internet service. However, the village head always reminded to keep a distance from each other to the villagers who gathered near the internet signal tower.

Nowadays, the village administrations have started to promote new social life in the new normal era in the advanced stages of COVID19 mitigation in rural areas. The new social life is a condition in which the village community can return to social activities, work, worship as usual, but with a new habit model. The village administration was preparing an adaptation process through changes in lifestyle in the context of the COVID19 pandemic. One of them was the policy of allowing citizen activities as long as it follows health protocols. Village residents must avoid gathering of many people in their respective village areas. This policy is imperative because Sampang is a well-known area for religious activities due to the many madrasah schools in the regency, making it the basis of a strong santri group. One culture of the santri group, usually before Ramadhan fasting, various religious activities were conducted involving potentials of large crowds gathering. Thus, the village agreed with religious figures, such as Kyai, the Ustaz, and owners of the madrasah to postpone religious celebration activities in the village.

The author found an interesting phenomenon in the implementation of the transition to a new normal life in Sampang Regency. The village head of Panggung village was able to be a good role model for the village residents in observing social restriction policy to prevent mass gatherings. The wedding reception for his son only involved about 10 people from the groom and bride families. Even the wedding ceremony seemed quiet because it did not use loudspeakers at all. The wedding reception was an excellent example related to the village head’s decision to establish a social restriction policy. He hoped that his village residents should be more aware of and avoid holding luxurious events because even the village head avoid such an event. Moreover, most of the village residents belonged to the lower class, so their social status is still below the elite group, namely the family of the village head. Nevertheless, if a village resident insisted on holding a wedding party that has the potential to be a mass gathering point, the village administration would deploy various tactics, from persuasive means to force dismissal.

5. Conclusion
From the study, it could be concluded that the village administration’s innovation strategy to overcome the COVID19 pandemic in Sampang is relevant to the typology of public sector innovation. The researchers elaborated the roles and innovations of the village head into three categories. First, service product innovations which included the distribution of free
masks for village residents, distribution of direct cash assistance from village funds or BLT-DD, and assistance of daily necessities, including food aid. Second, the service process innovation found in the village administration’s quick response to form volunteer teams chaired by the village heads. The volunteer teams were tasked with recording people who entered Sampang Regency villages from the red zone, distributing free reusable cloth masks, making hand washing stations at various locations in the village, spraying disinfectant liquids at village public facilities, and finally handling coordination posts at several points in each village, especially the main post at the village Pagel and the post at the main access road to the village. In addition, village administrations established call centres to provide fast service should there be sick residents or new arrivals in the village. The village administration also used electronic device technology to assist the work of COVID19 volunteers in the village, especially in the field of communication technology. The teams utilised handy talkie (HT) communication devices to monitor the development of the pandemic. One village also used a loudspeaker sound system in every coordination centres. These methods were vastly different compared to village guarding is considered more sophisticated than the traditional “kentongan” tools.

Third, the village administration policy innovation provided a free internet network through the construction transmission tower capable of transmitting wifi signal throughout the village. However, this program was still constrained by the development of internet infrastructure, and unevenly distributed signal quality in every village. The village administration made various policy innovations in handling the COVID19. For example, social distancing policies in order to adapt to the new normal era at the village level. The volunteer team urged village residents not to hold activities that might gather a large number of people to lower the risk of transmitting the COVID19 virus. However, if residents must continue to hold activities, there was a limit on the number of participants who must adhere to health protocols.

These three forms of innovation made by the village administration in Sampang Regency has strengthened the position of innovation level theory based on Mulgan and Albury Innovation typology. Successful innovation is the creation and implementation of new processes, products, services, and service methods as a real development in terms of efficiency, effectiveness or quality of results. This research proved that innovation had developed far from the initial understanding that only covers products and processes (Mulgan & Albury, 2003); (Muluk, 2008). Furthermore, there were levels of innovation that measure the magnitude of the impacts, ranging from incremental, radical, to transformative. Researchers concluded that village innovation during the pandemic was included in the level of incremental innovation, which means bringing small changes to existing processes or services at the village level in Sampang Regency.

However, it should be noted that the Sampang case shows the limitations of this study. Due to the pandemic situation, researchers could not come directly to the 10 villages so that key informants had the potential to exaggerate or reduce the quality and quantity of information provided. Meanwhile, further research might elaborate more fully other forms of public sector innovation from various central and local governments. Further research can focus more on analysing service method innovation and service system innovation because it has not been discussed.
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