FACTORS CAUSING URBAN LIFE DISRUPTIONS: A CASE STUDY ON COVID-19 PANDEMIC IN YOGYAKARTA

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Abstract

Urbanism happened in the city causes smart urbanism as a result of the development of smart technology applied in the urban areas. Urban hardware, urban software, and urban actors are those three main components that form urbanism. Similarly, platform has spatial, economic, and political service effects. The study was conducted in Yogyakarta. It is quantitative study. Random sampling was applied to select the respondents for the study. The questionnaire was created in googleform and distributed through WhatsApp. There were 64 respondents in this study. The result of the study shows that community members had been involved in planning and implementing program and activities for Covid-19 handling. Community members provide useful information related to Covid-19 handling such as providing information about positive cases and travellers who arrived in their neighbourhood. Community members were also involved in giving opinions and ideas for preventing and handling Covid-19 especially in their neighbourhood.

Keywords: Urbanism, Urban, Platform, Covid-19, Pandemic

INTRODUCTION

Urbanism is defined in Cambridge dictionary as “the type of life that is typical of cities and towns”. Similarly, it is also described as “a process by which more and more people leave the countryside to live in cities and town”. Merriam-webster dictionay defines urbanism as “the characteristic way of life of city dwellers as well as the study of the physical needs of urban societies”.

The development of smart technology is one of the characteristic of urbanism (Barns, 2020) which results on smart urbanism. The power of globalisation and the reactions of urban actors cause a condition where factual things are dissapearing and are being replaced by simulations, hyper-realities, and models (Gottdiener, 1995). Globalisation creates complexity among cities in Asia including its regional governments and central government (Hans-Dieter, 2011).

Urban lifestyle which dominates civilization has been spread out through the cities’ boundaries. Urbanisation causes urbanism. Wright as cited in Soetomo (2018) defines urbanism as the city dwellers and cultural condition. However, based on the understanding about city construction in France, urbanism is the science of space planning and management for human kind needs.

O’Reilly (2010) states that government acts as a platform that allows software innovators to access and merge public data to create innovation in providing service for cities, provinces, and country. Urban areas can be seen as political space which fulfils thoughts and acts (Amin and Thrift 2002). Urban management in smartcity, which utilize technology, puts city under operating system, an analogy used in computer science (Saunders and Baeck 2015). Hence, cities are experiencing recurrent disruption due to urban computing through programmed and managed calculation, understanding, and control. This includes taking into account nation and citizens’ role as well as the urgency of public space towards authorized party (Luque -Ayala dan Marvin, 2015a).

Zahnd (2006) believes that cities and urbanism are made of urban hardware, urban software as well as urban actors. It is called as working mechanism platform. Platform is defined as a device which allows participants to create and share values between them (Choudary, 2015).

Urban platform is usually connected to urban agglomeration. Meanwhile, this study proposes understanding of urban platform before utilising it

to analyze the management of covid-19 handling in Yogyakarta. The data gathered for this study is analyzed descriptively using theory of urban platform management establishment. This study is aimed at identifying the need of platform based urban management.

Urban Changes Dynamics

Gillespie and Ananny states that platform has potential which strong and sometimes invisible. Platform services have spatial, economical, dan political effect as part of urban spatial and social transformation dynamics.

Urban management does not only cover urban organisation or apparatus that carry out managerial tasks in conventional enterprises (Chakrabarty.B. K., 1998). These tasks are the dynamics of urban issues. However, these tasks are additional management tasks of urbanisation process, urban development, and urban operations. Control over enterprises requires collaboration of organized corporates which have social sensitivity. Furthermore, collaboration in all system levels and sectors is required and stakeholders participation is necessary.

In order to solve problems in the cities such as slums, congestions, and environmental problems, inclusive development approach is needed (Hardiansah, 2015). Inclusive development does not only benefit the economic sectors but also other aspects in the society. It also drives the urban life dynamics. Ranieri (2013) in Hardiansah (2015) states that inclusive development concept will be more beneficial if it is applied to improve growth by involving community members' in the process. Hence, the benefits achieved are greater.

There are two different points of view that describe urban planning. Taylor (Taylor, 1998 as cited in Masik, 2005) believes that urban planning is related to physical planing. However, Friedman believes that physical aspects are part of urban planning. Healey (1997) states that there are dynamics in planning. The planning process changes from central planning into regional planning and from capitalism planning (Keynesian) into neo liberalism planning. Moreover, Brooks (2001) believes that the changes are from modern to post modern and from multi culture to multi public. It is related to community multi values.

Disruptive Cities

Innovation has happened for a long time which disrupt and transform urban life experiences (Barns, 2020). Disruption is a condition that the cities experience whenever inovation in technology happens. One of the examples is the development of smart city. Smart city is a city management which is supported by data driven model using digital network. In its applicaton, there are several data driven urban management softwares such as city dashboard, smart infrastructure initiatives, and big data analysis program (Barns, 2020). Furthermore, Marlinah (2019) defines disruptive innovation as unpredictable product and service development. In this case, disruptive innovation is done by bringing up different costumers in the new market and reducing prices in previous markets. Hence, creativity is needed for enterprises to survive including utilising different marketing strategies.

Disruption is a term introduced by Clayton M. Christensen dan Joseph Bower in their paper titled *The Disruptive Innovation* published by Harvard Business Review in 1995 (Sunarya, 2018). The article which is intended for the executives who make decision related to funding and purchasing proposes the importance of company's income for future needs. Disruption can be simply described as an innovation to create new markets and destroy the previous markets. Disruption is a recurrent process. The process changes rapidly alongside the rapid development of informational technology.

Kasali in his book entitled "Disruption" examines disruption theory from Clayton M. Christensen applied in business, government bureaucracy, and social community. Kasali defines disruption as disturber, trouble maker, or culprit. As an innovation, disruption is going to replace old system such as utilising digital technology as well as creating efficient and effective work. Disruption turns conventional technology into something modern, practical, simple, effective, efficient, and adaptive. Kasali also proposes no ordinary disruption, a term that describes complicated situation which creates anxiety.

The development of information and technology affect many aspects of life. It connects people around the world in a great disruption. The changes are no longer exponential but rather linier. The changes in human activities and technology application such as the use of robots and e-money have offered money only as digital notes. Hence, people are forced to have vision of the future and change their old habits. This condition is called self-disruption.

Disruption does not only related to informational technology and communication but also related to business applications, start-up, and online transaction. Disruption which happens in government bureaucracy is described as cost reduction as a result of simpler process and better quality. Disruption also happens when new markets appears and becomes inclusive and when there is simple access and interactions as well as intelligency, accuracy, and time saving.

Furthermore, Aziah and Rabia (2018) define disruption as something that bothers and disturbs. The context is related to innovation in technology where new technology replaces the previous ones (Hamid, 2017). Amajida (2016), as stated in Aziah dan Rabia (2018), believes that technology has created digital society where people are connected with internet and its devices.

Sumiati (2018) believes about the needs of enterprises to adapt and respond to changes that happen in order to survive and win the competition. Therefore, due to open access and inclusive markets, there is a chance of integration among economic actors especialy in the urban areas as the center of economic activities.

Disruptive innovation and technology has been able to create economic peluang for small and middle enterprises as well as creating integrated and sustainable urban system. Balance in economy and urban system in disruptive innovation era happens as a result of effective and flexible regulations. Regulations should be able to brige all parties.

PLATFORM AS A BASIC NEED FOR URBANISM IN DISRUPTIVE ERA

Definition of Platform

The word platform which has been used since the 16th century (Gawer, 2011) refers to a raised surface for people or objects to stand and have different structure used for certain activities or operation.

Platform was derived from French “plate forme” which means diagram which literally means flat form. Amrit Tiwana (2013), an IT governance and knowledge management expert, defines platform as a software-based product. The product is a service which functions as the base or foundation where its complimentary service products can be created by external parties.

Other definitions proposes by McGrath (1995), Meyer and Lehnerd (1997), Krishnan and Gupta (2001), Muffato and Roveda (2002 in Gawer, 2011) refer to a set of elements of subsystem and interface that build basic structure of a technology product in which its derivative products can be developed accordingly. Furthermore, patform can also be seen as a set of assests terdiri dari components, processes, knowledges, people, and connections related to certain set of product (Robertson and Ulrich, 1998).

The development of technology has made platform adopted as a term in urban management. Urban areas are the center of infrastructures and policies development which are able to make the communities and stakeholders to take part in its development (Bollier, 2016). Therefore, urban area is called as platform. Choudary (2015) states that platform is a set of devices which allows particpants to create values and exchange the values among themselves.

Cities have become governancy trials where public as well as government agencies contribute and hold responsibilities. A successful platform gives opportunity to its local community to engage in the process constructively without excessive control.

Therefore, platform can be defined as a set of products or services in the form of the development of infrastructures and policies. Platform consists of subsystems which function as a base or foundation for outside parties to create derivatie products or services and its complements efficiently. Moreover, platform opens for public to take part and contribute and creates a situation in the communities and markets which allows users to interact and do transactions.

Elements of platform

Platform consists of main element (core) and complementary element (apps) divided into multisidedness, network effects, multihoming, achitecture and tata kelola (Tiwana, 2013). Platform for planning should be understood from structure, governance, and evolution. It is also applied when platform is used in a city.

The products of platform are component hierarchy of structural architecture, subsystems, and systems. The structure explains about fuctional requirement of system, arrangement of functional elements and physical components and explains interactions between the components (Gawer, 2011). Hence, Choudary, Parke, Van Alystne (2015) propose complete and platform components which state that network-marketplace/ communities, infrastructures, and data are the element of platform.

The Use of Platform

Platform product is proven to be used to organize high capacity production, cost provision, and long duration related to marketplace. Platform handles changes just like when industrial revolution happened. Changes in trading happen where platfom connects one or more participants who rely on each other to create mutual benefits.

The Function of Platform

Platform is different from computer operating system. Platform is a basic medium for operating system to work while operating system cannot function without platform. Based on its function, there are two different types of platform. The first one is platform which support only one manufacture and the second one is platform which supports multi-maufactures. Blackberry, iPhone OS, iPhone, and iPod are examples of platform that can only be implemented in single device, the device in which the platform is intended for. Java, ME, platform Symbian, and Android are examples of platform that can be implemented in multiple devices.

Computing platform is a computing system which is called operating system (OS) in which application program can operate. Product platform is general design, formula, or multipurpose product which can be used across a range of the company's products (for example car chassis produced by certain company which can be used for more than one car models). Industry platform is a set of products, services, or technologies function as a foundation to create complementary products, services, or technologies (for example Intel as a platform created by Intel Corporation). Platform as a service is a cloud-computing service which provides computing platform and solution as online services (for example Amazon web service)

Platform is a foundation for software and hardware systems to work. Technology cannot operate without platform. Cities and urbanism happen as a result of urban hardware, urban software, urban actors (Zahnd, 2006) which identify as platform work mechanism.

URBAN PLATFORM THEORY

Urban Planning

Platform based ecosystem consists of two major element, the platform itself and its complementary applications. As stated before that platform is a software, product, or service which serves as a foundation for other parties to create and develop complementary applications. Broadening platform performance can be done by integrating the platform with other applications or interfaces which complete each other (Baldwin and Woodard, 2009; Tiwana et al., 2010 in Tiwana and Amrit., 2014).

Platform Typology

Internal platform, supply chain platform, industry platform, and multi-sided markets or platforms are several typologies of platform (Gawer, 2009). Internal platform is a platform used internally in a company and used only in one company. Supply chain platform is a platform in the supply chain circle. It involves many enterprises which have roles in the supply chain circle. Industry platform is everything inside the industrial environment involving some enterprises which produce goods and services. The platform is applied alongside other systems. It serve as technology system although they are not directly involved. Multi-sided market/platform has intermediation role which connects two participants (or in this case enterprises) or more. Therefore, the enterprises can find and relate to each other easily as they are able to make direct connection.

Platform Startegy

Platform strategy is required to resolve disruption, arrange planning scenario, and resolve problem which might arise as a result of the choice made. Platform strategy determines principals for the future working guidelines and serves as a foundation in policy making. The strategies will determine where certain ideas and subjects are so that they obtain the most suitable roles.

A program of action has to encourage interaction between participants. It also needs to be relevant to promote visibility such as iTunes which is a superior application. The program of action should also be relevant to identify ways which strengthen participation values on platform (Dawson, 2018).

Urban Life Platform

Urban area planned and built with technology experiences changes and disruption every time. In this digital era, a city's vision is like an operating system of a computer (Saunders and Baeck, 2015). Nowadays, urban management is usually done using urban dashboard software, smart infrastructure initiative, and big data program analysis.

Urban areas experience disruption any time since they are planned and built with technology. The use of plartform based technology in urban management and planning minimizes the

differences of physical and digital spaces. Hence, software developers are able to improve their contribution in urban development.

In urban life, platform serves as scaffolding in modern life (Gillespie and Ananny, 2016). Unlike an infrastructure which is attached and visible, urban platform has unquestioneable standards and will only appear to be failed when it cannot serve its roles (Star and Ruhleder, 1996). Furthermore, platform can be seen as contexts, ideas, and computations. Platform is integrative as it is created in digital era. This characteristic allows platform to connect hardware and software according to the determined standards. Paltform disrupts content distribution model, diversifies content, and broaden its users. For example, YouTube has transformed into sources to share contents in 2007 and become distribution medium for content creators and advertisers (Gillespie 2010: 348 as cited in Barns, 2020).

Government transforms themselve into platform (O'Reilly 2010 in Barns, 2020). Therefore, it opens opportunity for software innovators, accesses and combines together public data, encourages new services and innovations for citizens . The use of platform enables the government to find solution of collective problems faster since there are constructive interaction and enhancement in other parties' performance (Choudary, 2015).

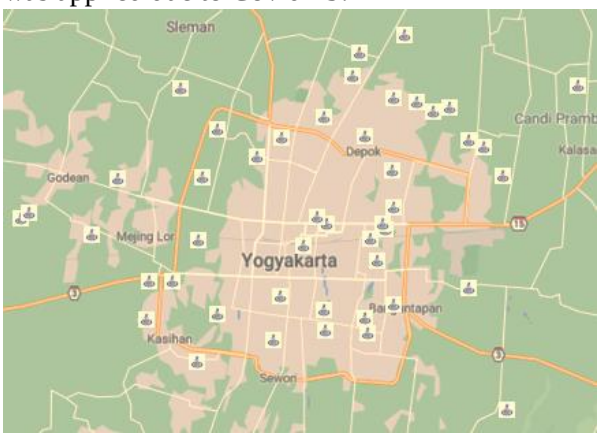
Big data in urban management is important to explain the connection between urban management and urban planning. The use of big data in urban management is needed to explain the connections between discrete management and urban planning. It is aimed at integrating utility, transportation, and housing provision and management in more responsive ways (Crawford and
Goldsmith 2014; Leszczynski 2015; Kitchin 2014). Moreover, its connection with IoT shows that social capital is as important as money capital. Exchange value has been replaced by divisible value in collaborative ownership (Rifkin 2014). Experts describe this phenomenon as a shift from "pipes" to "platform" (Choudary, 2015; Alstyne et al. 2016); from "service and product competition" to "platform based competition" (Tiwana 2013); and from "vertically integrated enterprises" to "platform ecosystem" (Simon 2011). Estonia, as well as India, has implemented platform based urba management. Toronto, Copenhagen, New York, and San Francisco are severa cities which have implemented platform based urban management (Barns,2020).

CASE STUDY

Research Method

Yogyakarta is one of the cities in Indonesia which apply smart city in managing the city. Furthermore, in the beginning of Covid19 outbreak, small regions and districts in Yogyakarta has independently anticipated the spread of Covid19 by locking down their territory. It is known as lockdown *kampung* which apply control over activities. Thus, the researchers chose to conduct the study in Yogyakarta.

The study was a quantitative research which used googleform to gather data. It was done by considering the situation where social distancing was applied due to Covid-19.



Picture 1

Random sampling was applied to select the respondents for this study. The 64 respondents were selected as they have common knowledge about the area. The questionnaire was distributed through groups as well as individuals messages in Whatsapp Meesenger. The characteristics of the 64 respondents are as follows:

Table 1

No.	Characteristics	Sum	
		f	%
1	**Sex**		
	Male	31	48.4
	Female	33	51.6
2	**Age**		
	>51	10	15.6
	21-30	16	25.0
	31-40	21	32.8
	41-50	17	26.6
3	**Occupation**		
	housewife	1	1.6
	Civil workers	24	37.5
	University student	4	6.3
	Private sector worker	6	9.4

	enterpreneur	5	7.8
	others	24	37.5

The picture describes the respondents' residence during Covid-19 outbreak.

In this study, there are two steps of data analysis namely content analysis and univariate analysis. Content analysis was applied to analyse data gathered from library study. The univariate analysis was used to get description about urban management during Covid19 which was seen with urban platform theory. The data is presented descriptively to discover the main topics.

ANALYSIS AND DISCUSSION

Urban platform theory was applied in this study by analysing the urban platform variables. Urban platform variables are network, data, and infrastructure.

Network.

The provincial government of the Special Region of Yogyakarta has taken numerous actions in the covid-19 handling management including improving coordination of provincial and sub-district covid task forces. However, unless there were positive Covid-19 found in their areas, this network seemed to be invisible. The network built for Covid-19 handling consisted for public figure, housing management, and the task force's members. Based on the study, it was found that those who participated in Covid-19 handling network were those who were appointed by regional government (16%), had power over their position (61%), and were personally commited to take part in Covid-19 handling (20%).

The involvement from government agencies as well as community is needed in order to fulfil the community needs in preventing and handling Covid-19 cases in their area. Nine percent (9%) of the respondents stated that the activities for Covid-19 handling were disinfectant-making and thirty four percent (34%) stated about the disinfectant spraying in the neighbourhood. The disinfectant spraying was done several times arranged by the sub-district. Local community members were those who took part in this process. Hence, the respondents believed that the role of those who participated in the networking was important (83%) especially in the beginning of the outbreak. However, some did not think that they had important role.

Opinions and inputs from those who engage in the networking have not been accomodated completely especially when people started neglecting the health protocols. The head of the community of housing complexs were those who gathered inputs and opinions. Therefore, in order to manage the network, WhatsApp was used to communicate between them. Most of the participants (84%) used WhatsApp by making group conversation to make communicate easily and effectively. Electronic Health Alert Card (e-HAC) was also presented for those who travelled.

Strong leadership

Planning helps leaders to identify necessary actions to achieve goals (Schermerhorn, 1996: 10, in Puspaningsih, 2002). In this case, the leader for Covid-19 handling is appointed by the authorized official or it can be the officials. As an example, the president created Covid-19 task force in the capital. In sub-districts, the official created teams to monitor the residents. The study finds that leadership management was done in community meeting forum (30%).

In general, the management had involved many parties. The leadership formation was done in community meeting and the head of the community of housing complex made decision for the residents to apply. However, the leadership structure in the team was not clear. The study showed that the targets of handling were explained clearly. Ninety four percent (94%) of the respondents agreed that in local scope it had been done clearly. Furthermore, the respondents believed that the leader showed tolerance towards diversity in their leadership (83%).

Empowered people's community

Urban management is a management which manage people activities in a certain area covering planning and development. The management needs to be identifies clearly including its responsibilities. If the responsibilities are not clearly identified, it will affect the strength of the management in regional area.

Community had been involved in the planning process through discussion in the community meetings. They were also actively involved in developing the Covid-19 hadling. People reported about travellers from outside Yogyakarta, gave information about the residents who were positive for Covid-19, and monitored the neighbourhood. Furthermore, people also presented their ideas and opinions in the meetings as well as carried them out. People had initiative to put posters about Covid-19 prevention. Meanwhile, people still relied on the leader to actively engange in the activities.

The community members, both native and immigrants, as well as the housing management and residents also took part. They monitored the area and put their effort to ask people to obey health protocol. They also made sure that the community meetings, area cleaning, and disinfectant spraying could be done accordingly. They used the WhatsApp group chat to communicate each other (89%).

Environmental Care

The Covid-19 pandemic has changed in people life. They create new behaviour in their daily life known as new normal. People are required to wear mask, wash their hand often, and distance themselves from each other especially in public places. Therefore, there should be mutual understanding between the government and enterprises in order to apply the new normal accordingly. The study found that community members and officials worked hand in hand to take care of their surroundings.

Meanwhile, lack of control over the implementation of health protocols especially in public areas such as restaurants and supermarkets happened. The government apparatus, which held responsibilities, had not done their job appropriately. However, the respondents agreed that government apparatus had work accordingly to build awareness of Covid 19 in their area.

Political and adminisrative control of regional government

The provincial government of the Special Region of Yogyakarta holds responsibility in preventing and handling Covid-19. Doing campaign on health protocol and helping those who confirmed positive for Covid-19 were the regional government responsibilities. Public health departments are responsible in Covid-19 handling. Since the middle of March 2020 when Covid-19 case first appeared in Indonesia, many districts in Indonesia started to tighten restrictions in their areas. Most funding came from local government budget (APBD). However, many communities were self-subsistent in providing fund for Covid-19 handling.

Limited fund provision from grant and loan

The government has taken some measurements prioritized for poor and those in order to help those who severely affected by Covid-19 pandemic. One of the programs is cash transfer program (BLT). The pandemic has lowered income of many of Indonesian citizens. Therefore, the financial management has not been effectively socialized to the public. Networking technology helped the distribution of capital support for small enterprises.

Although there were embezzlement found during the distribution of cash-transfers, most of the targets have been achieved. In distributing cashless transfer program, information techonology was used. However, there was lack of coordination in preventing and handling Covid-19.

Development of infrastructure and management

The policies that the government made in handling and preventing Covid-19 pandemic were issuing Circular Letter and giving assertive sanctions for the violators (33%). The infrastructures needed in the housing areas were places for handwashing (42%). The community needs Covid-19 handling management even in the smallest community group since they only found information from mass media. Furthermore, body temperature measurement, crowd management, providing places for washing hand, and obligation for people to wear masks were needed to combat the spread of Covid-19. Those rules have been applied in Malioboro Street.

Data and analysis

The data about social, economy, environment, and culture related to Covid-19 handling are needed. However, people's health record and economic condition were two of the important data. In the citizenship database, the data input was done by providing form for the people to fill in. Online form was also provided. The form was to know people health and ecnomic condition. Then, the data were used for mitigation and Covid-19 prevention as well as the effect of Covid-19 pandemic to people's economy. The access to citizenship database was given to the sub-districts official. They were responsible to update the database. The data were presented to public through the local network built for Covid-19 handling.

Policies and Regulations

The policies and regulations needed are Covid-19 emergency response plan dan procedure. In Yogyakarta, regional regulation (Perda) was applied (39%). The regulations were needed to prevent the increase of Covid-19 cases since they were used to mitigate Covid-19 cases so that the number of case could be put down. The provincial government of Yogyakarta Special Region was responsible in making policies and regulations. They provide a website for Covid-19 database which can be accessed plublicly. However, the

implementation of the regulation was not optimized.

Housing and dwelling infrastructure

The infrastructure that needs to be present in housing and dwelling are places for washing hand, hand sanitizer, and social distancing sign. They are used to minimize the spread of the virus. Furthermore, social media platform and application such as WhatsApp were two most important platforms for maximizing the implementation of Covid-19 programs. Information centre for Covid-19 also presented in sub-districts as well as social media. Therefore, good internet connection was required since it helped people to acess the information.

Transportation Infrastructure

The most important thing for Covid-19 handling is providing emergency ambulances in each areas. Each district should be able to provide an ambulance for transporting those who are tested for Covid-19.

Recent urbanism pattern is related to the use of applications to support urban life. Digital urbanism has caused disruptions in economy, bussiness, culture as well as politics and institutions. Platform, which is related to application based business, is one of the result of this technology based urban management. The characteristics that platform management has often allowed formality present in the institution.

CONCLUSION

Platform is a series of products or servives in the form of developed infrastructures and policies. There are subsystems in platform which function as foundation which allow outside parties to create derivative products or services as well as their complentary products. Moreover, platform opens possibility for public to contribute and allows them to develop community and marketplace where users can interact and make transactions.

From the presented empirical problems, we are able to recognize the substantial things needed to be available in a city. A foundation is always needed when changes happen. This is the underlaying idea

One of the implementations of urban platform during the Covid-19 pandemic was implementing health protocols campaign or usually called 3M, mask-wearing (*memakai masker*), handwashing (*mencuci tangan*), and social distancing (*menjaga jarak*). The covid task forces also provide announcement and poster in the public areas to remind people about the health protocols. The networking for covid-19 handling comes from the closest nerighbourhood, the local community, and the residents. They actively engaged in the activities in preventing the spread of Covid-19. The prevention in Yogyakarta was inclusive activities.

Every local community was involved in planning for preventing and handling Covid-19. Both planning and implementation were done inclusively. People participated and supported the programs. Whatsapp chat was the most effective way for them to communicate since people were not allowed to hold meeting. Furthermore, health department, sub-districts, security forces, and Indonesian National Board for Disaster Management (BPBD) also worked together with the community.

The distribution of cash transfers was done fairly although many of the respondents were not well-informed of the distribution process. The regional government, private sectors, and community members worked together to prevent and handle Covid-19. Meanwhile, some of the respondents were not aware of it. The implementation and the execution time were not informed in public. The respondent believed that managerial effort should be prioritized and providing adequate infrastructure for Covid-19 prevention became the next priority.

Furthermore, the data about community members who affected by the pandemic was not done accordingly. Some of the respondents stated that after the officials gathered data, they received information about the aid provided by the government and then received it.

Community members had involved in planning the program as well as the implementation especially in community meetings. Community members were also involved in the development of the programs and Covid-19 handling. When there were people from outside Yogyakarta arrived in their neighbourhood, community members reported to nearby Covid-19 task forces. They also gave information about people who were tested positive for Covid-19, monitored their neighbourhood, distributing poster and information about Covid-19 prevention, as well as carried out the programs. During the meetings, they proposed their ideas and suggestions for Covid-19 prevention. However, leadership was greatlly influenced community members' participation.

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