Analysis of Socio-Economic Determinants of the Existence of Network Societies in the Pandemic Era

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Abstract

Numerous aspects of human life have changed as a result of the advancement of science, particularly in the field of information and communication technology. They no longer need to be in a specific location because it is so simple to build a network today. They can create a network based on shared objectives and experiences. Manuel Castells (1981) created the term "Network Society" to describe a new idea of society in the digital age as a result of this occurrence.

The Pandemic that swept the globe and lasted more than two years has made research on the Network Society interesting in recent years. As a result, the goals of this research are to (1) ascertain how the covid-19 pandemic affected the existence of networked communities among MSME actors, (2) ascertain the state of the networked community among MSME actors during the pandemic era, and (3) determine what factors influence the existence of a network society among MSME actors on the island of Lombok.

The researcher creates a strategy for data collecting utilizing a questionnaire in this study, which employs a descriptive method with a quantitative approach. Based on the criteria for the location of the respondent's residence, namely urban and rural areas, the research location was chosen using a purposive sampling strategy. The study's findings demonstrate that, generally speaking, the COVID-19 epidemic has little impact on the existence of networked societies, particularly among MSME actors. One of the catalysts for the emergence of new MSMEs in the research field is the pandemic. Community networks among MSME actors have expanded during the pandemic. Social and economic reasons are the main determinants of the growth of a networked society among MSME actors.

Key words: Community, Pandemic Covid-19, MSME, Network Society.

INTRODUCTION

In the era of open information, easy access to technology is changing the way people build connections. Now people no longer need to be in the same area to build networks. In 1981, Manuel Castells in his book The Network Society introduced network society or networked society. The phenomenon of the concept related to network society is in line with the phenomenon of information and communication technology (ICT) development, which causes the basic concept related to network society to continue to evolve and become a multidimensional concept (The Network Society, 2005).

The world is in a process of structural transformation for technology in a network society. In addition, information and communication technology is very sensitive to the effects of social use on the technology itself. Long before the outbreak of Covid-19, the history of the Internet provided ample evidence that technological networks were in accordance with people's needs, values and interests in the application of new technologies, it's just that not all people can maximize them. Society is mentally framed in an evolutionary view of human progress, reinforced by Marxism in which humanity is led by Reason and equipped with Technology, moving from survival to an agricultural society, then to an industrial society, and finally to a post-modern experimental/information/knowledge society. industries, hills indicating where Homo Sapiens would eventually make a better place to live. The Nazi or Stalinist Holocaust was a witness to the destructive potential of the industrial era, and when the magic of the information technology revolution coexisted with the life processes of people in a globalized world. (The Network Society, 2005).

A conceptual framework related to network society after the Covid-19 pandemic, where social structures result from interactions between new technological paradigms and social organizations in general. Societies are at the same time flexible and adaptive with increased capacity to decentralize performance across a network of autonomous components, while still being able to coordinate all of these decentralized activities for the purpose of shared decision-making. Digital communication networks are the backbone of a networked society during the COVID-19 pandemic, because networks are infrastructure that bridges various important aspects, as historian Thomas Hughes has shown regarding industrial societies built on network infrastructure. Network society manifests itself in various forms that adapt to the circumstances, culture, institutions and its theoretical trajectory of each society, because

industrial society includes different realities such as the United States, and the Soviet Union, Britain or Japan (The Network Society, 2005).

Network Society is based on networking, and communication networks transcend boundaries, network society is global, based on global networks. Thus, it permeates the entire planet, its logical transformation extending to every country on the planet, as it is spread by forces embedded in global networks of capital, goods, services, labor, communications, information, science, and technology (The Network Society , 2005). The concept described by Jan van Dijk, Barry Wellman, Hiltz and Turoff, and Manuel Castells is embodied in digital technology. Social networking sites such as Facebook, email, WhatsApp, and others are prime examples of a networked society while working from home. These web services allow people around the world to communicate through digital devices without having to meet face to face during a pandemic. It shows how the ideas of society change and will affect the way people communicate over time.

The development of a networked society in Indonesia is very rapid. Currently, almost all individuals, especially in big cities, are interconnected with the network. Currently the internet has entered human life with a significant growth in usage in Indonesia. Data from We Are Social and Hootsuite show that in January 2020 there were 175.4 million internet users in Indonesia, or 64%. Compared to the previous year's data, there was an increase of around 17% (Kemp, 2020). In addition, polling data for Indonesia and the Association of Indonesian Internet Service Providers in 2018 shows internet users in Indonesia have increased by 10% compared to 2018. This study shows 171 million people or 64.8% of Indonesia's total population of 264 million have been connected to the internet in in 2018, resulting in an increase from 2017 data which was only 54.86% (Jakarta Post, 2019).

Social media users in NTB have increased since the pandemic. Of the 5.4 million people in NTB, 2.7 million of them are active users of social media. Information technology is a vital tool in the midst of the Covid-19 pandemic which requires people to do many activities at home. Its use in West Nusa Tenggara (NTB) Province itself has been growing (Talikanews, 2020). Based on the data presented by Talikanews (2020), a study is needed that focuses on what factors influence the formation of a networked society, the influence of the Covid-19 pandemic on the formation of a networked society and how the condition of a networked society is post-pandemic. This research is very important to be carried out

immediately so that the government can produce the necessary policies in order to increase the effectiveness and efficiency of network use in society.

The information technology revolution has produced a networked society that is characterized by Manuel Castells as space and time. Network logic encompasses multiple dimensions of human life and is exclusive to those not involved in the network (Sheppard 2002, 307–330). In a networked society, public space develops dynamically and becomes more interactive because of the mediation of the Internet. The transformation of public space spreads power in a network society amidst a pandemic. The strength of a networked community is evident in various ways, one of which is the birth of various groups of Covid-19 volunteers who have an extensive network in a short time without face-to-face processes. Various efforts have also been made to embrace as many people as possible in a network to become transmitters for the continuity of the Covid-19 prevention protocol. Various obstacles that occurred during the pandemic, where people had to implement health protocols in their daily lives, were resolved or found solutions facilitated by information and communication technology (ICT), especially social media.

When looking at the development of information technology that forms a networked society in influencing the transformation of public spaces in cyberspace relations, it can be seen that the problems in this study are as follows: First, how does the Covid-19 pandemic affect the formation of a networked society (network society) and (2) How is the condition of a network society during this pandemic? In addition, (3) what factors influence the formation of a network society on Lombok Island? Efforts to answer this big question will lead to an understanding of social changes in society in utilizing networks.

It is hoped that the results of this study will be able to provide an overview of how the condition of networked communities on Lombok Island during the Covid-19 pandemic. In addition, this research was also conducted to determine the effect of the pandemic on the formation of a network society on Lombok Island.

This research on network society, especially on the island of Lombok, is very important for several reasons. First, this research is the first to be conducted for Eastern Indonesia. A similar study was conducted in the Tamalanrea Indah Village, South Sulawesi Province. However, this research does not focus on the state of a networked society (network society) in the pandemic era but on networked societies, the internet and communications. Second, this research is interesting to do because of the Covid-19 pandemic which we know has

forced people to use more social media or information technology in solving various problems they face. Third, Lombok Island is a super priority tourist destination in Indonesia, second only to Bali. The formation of a network society in tourist areas is a necessity because of the high influence of tourists. In accordance with the research problems as described above, this study aims at the following:

1. Knowing the influence of the covid-19 pandemic on the formation of a networked society.
2. Knowing the condition of a networked society (network society) in the pandemic era.
3. Knowing what factors influence the formation of a network society on Lombok Island.

Networked Economy and Society

An analysis of different models of networked society can have a starting point of four-dimensional individualization (technology, economy, social welfare and values), where one can better understand what is the position of each society in relation to a globally networked society (Castells and Himanen , 2001). On this basis one can assume that a networked society is one that has solid information technology: infrastructure, production and knowledge (Castells and Himanen, 2001).

In the 1990s, investment in information technology as a source of GDP creation in countries such as the United States, United Kingdom and Canada equaled in percentage the isolated contribution made by labor or capital investment not derived from information technology (Jorgensen 2005). The trend toward a convergence of the contribution of investment in information technology with that of other investments in capital or the contribution of labor would appear to be common to all more developed countries, albeit to varying degrees. Likewise, there is a trend in all countries towards increasing the added value provided by information technology in the creation of added value in the services sector (OECD 2004).

The productive structure of the information age does not consist of only technology companies (so-called "dotcom" companies) but also companies capable of incorporating information technology in production, organization, distribution and promotion processes. Therefore, the new economy is not only like amazon.com, e-bay or telecommunications companies, although these are indeed part of that economy, but also companies like INDITEX (the Spanish group that owns ZARA and other clothing brands) which have been able to use the Internet to reach their economic goals (Castells, 2004b).

Indonesia is still lagging behind in economic digitalization, based on the IMD World Digital Competitiveness Ranking, Indonesia is in 56th position out of 63 countries. In another index, namely the Global Innovation Index which measures a country's innovation capability, from 2018 to 2020 Indonesia's position has not changed and is ranked 85th out of 131 countries. So that at this time there has been a 'double-disruption' in the economic field, namely a shift in work due to digitalization or automation which was accelerated by the Covid-19 pandemic.

To achieve the goals in the 2045 agenda, as it is known, there are 4 main pillars in achieving Indonesia's 2045 vision, namely: human development and mastery of science and technology, sustainable economic development, equitable distribution of development, and strengthening of national resilience and good governance. In Indonesia, opportunities for the development of the digital economy are still wide open. This is supported by a number of factors, such as the 4th largest total population in the world, the number of productive age population reaching more than 191 million or 70.7%, supported by Generation Z of 75.49 million people, or 27.94% and Generation Y/Millennials which reached 69.90 million people or 25.87%. In terms of digital users, the number of Indonesian cellphone users currently reaches 345.3 million (125.6% of the total population) with internet penetration of 73.7% and internet traffic which has increased 15-20% throughout 2020. Even when Recently, new technological waves have emerged such as 5G networks, IoT, blockchain, artificial intelligence and cloud computing (Business Journey: Navigating in the Sea of Challenges, 2021).

Networked Society and Community Life

The information society is not only characterized by the use of technology but also internal openness and social life/welfare of the people. A networked society is an economic technology system in which the social structure and organizational activities implement information technology in the process of networking information networks. Social structure: involves the community to organize plans in relation to production, consumption, reproduction, experience and cultural communication skills.

The following are some benchmarks in the economic and social networks of a networked society (Castell, 2005):

1. The Network Enterprise

Castells concern for changes in work practices and work patterns. In Castells' view, networked jobs have massively increased throughout society, the increases are more satisfying than available labor in the past, far from the individual before them, and the changing realities of “networked societies” mean that people have to get used to being 'networked'. flexible' in what they do and what they expect to do in the future if they are to survive the current 'pandemic volatility'.

2. The space of flows

In the information society, Castell redefines the difference between the 'space of places' and the 'space of flows', for his emphasis on networked societies. With information flowing at the center of today's societal organizations, disparate and far-flung places can become 'integrated in international networks connecting the most dynamic sectors. Castells emphasizes the argument that area and settlement matter, but points out that we are now experiencing 'geographical discontinuities' that throw relationships out of order. Regional innovation [Urban, Sub Urban, and Rural] in particular will determine how a place will prosper or decline, but all will be integrated into a “networked society”.

3. Timeless time

Information technology creates new communication patterns continuously, destroys time, compresses and also eliminates time sequences. For example in global financial markets, war, new reproductive techniques, and health. Effectively, society is struggling to redefine “time”, between extermination and prosecution on the one hand, and 'real' consciousness in that time is constantly moving forward. The community is required to be able to adapt to the situation if they do not want to be eliminated in the era of disruption which has been accelerated by the entry of the pandemic.

4. The power of identity

The strength of the identity of the Indonesian people, especially Lombok today, is how the emphasis is on building a 'networked society' which includes integration and the tendency to divide towards concern for collective identity. The subject matter here is social movement, by which Castells defines effective collective action that changes societal values and institutions and thus provides people with a central element of their identity.

5. New forms of stratification

Capitalism directed by our ruling class now has capitalism without a capitalist class. Networks are adept and oriented 'network labour' responsible for running capitalism today.

This group has become a major force in society, responsible for almost everything from designing technology to managing change in the new normal. The manual laborers (called 'generic laborers' by the Castells) will be marginalized if they don't adapt to the conditions.

6. The demise of the working class

Castells considers that the system of stratification has been radically altered by information capitalism. Above all, this is manifested in the emergence of 30 percent of the work structure of the OECD (Organization for Economic Co-operation and Development) countries accounted for by a network workforce. Castells argues that information work is that variety of work that generates change, holds together the new economy, and generally does not think about the planning and operationalization required by information capitalism.

7. Epochal change

Castells contends that information capitalism marks a momentous departure from the era. While capitalism remains in force, it is clear, too, that he believes - as the title of his trilogy - that we have entered the 'web age'.

Research Hypothesis

The hypothesis is a temporary answer or a summary of theoretical conclusions obtained from a literature review (Martono, 2011: 71). This research was conducted to find out how socio-economic influences have on the existence of a networked society in the pandemic era.

a) The Relationship of Social Variables to the Existence of a Networked Society in the Pandemic Era.

Hypothesis 1:

H0 : There is no significant influence between social life on the existence of a networked society (Network Society) in the pandemic era.

Ha: There is a significant influence between social life on the existence of a networked society (Network Society) in the pandemic era.

b) The Relationship between Economic Variables and the Existence of a Networked Society in the Pandemic Era.

Hypothesis:

H0: There is no significant influence between the economy and the existence of a networked society (Network Society) in the pandemic era.

Ha: There is a significant influence between the economy and the existence of a networked society (Network Society) in the pandemic era.

RESEARCH METHODS

Data Collection Strategy

The research method is a scientific way to obtain data with specific purposes and uses. According to Siregar (2017), the scientific method is a way of applying logical principles to the discovery, validation and explanation of truth or scientific methods to achieve scientific truth to solve problems. Using the right research methodology to avoid speculative problem solving, and increase objectivity in exploring knowledge.

The research method used by researchers is a quantitative approach where researchers design data collection strategies using questionnaires. The selection of research locations was carried out using a purposive sampling approach based on certain criteria. The criteria used in this study are based on the area or characteristics of the area where they live: urban, suburban and rural areas.

Unit of Analysis

The unit of analysis in this study is the community of business actors who fall into the urban, and rural categories. The location chosen as the locus of this research is Lombok Island. To represent people living in urban areas, the City of Mataram was chosen. Of the 6 subdistricts in Mataram City, two subdistricts were selected, namely the Mataram District and Selaparang District. In Mataram sub-district, two sub-districts were selected: namely East Mataram sub-district and Pagesangan sub-district, while in Selaparang sub-district, two sub-districts were selected, namely West Mataram sub-district and Rembiga sub-district. For rural communities, West Lombok Regency was chosen including Narmada District, Batulayar District, and Kediri District. In each district, two villages were selected. For the Narmada District, the villages of Batu Kuta and Narmada Village were selected; for Batulayar District, Batulayar and Senggigi villages were selected. For the Kediri sub-district, the villages of Banyumulek and Kediri were selected. So that the total number of kelurahan/village is 10. In each kelurahan/village, 12 respondents were selected by accidental random sampling. Total respondents in this study were 120 people.

Data Analysis Techniques

The data analysis used in this study is multiple linear regression analysis. According to Danang Suyono (2018), multiple regression analysis is used to determine whether there is a significant effect of two or more independent variables (X1=Social and X2=Economic) on the dependent variable (Y=Networked Community Existence). The Regression Equation formula is as follows:

$Y= \alpha+\beta1x1+\beta2x2+\beta3x3+e$

Where:
Y = The Existence of Networked Communities in the Pandemic Era
α = Constant
X1 = Social
X2 = Economy
E = Errors

RESULTS AND DISCUSSION

Education for Networked Communities

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	57.730	7.980		7.234	.000
	Education	1.935	.654	.263	2.960	.004

a. Dependent Variable: Networked society

Based on the regression equation above, the following explanation can be obtained:

a = Constant = 1.935

Shows that if the Education variable has a constant value, then the Education variable is worth 57,730. Whereas in the analysis carried out on community education on the formation of a networked community which was carried out using the SPSS 22 program in the F test results table above, a significance level of 0.004 <0.05 was obtained, which means that there is an influence between education on the formation of a networked society.

In this study, education has a positive and significant effect on the formation of a networked society during the Covid-19 era. This means that the level of community education has an important contribution to the formation of a networked society. The

education variable measured in this study shows that a high level of education has positive implications for the formation of a networked society during the Covid-19 era.

Types of Work with Networked Communities

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	87.190	4.488		19.428	.000
	occupation	-2.784	1.887	-.135	-1.476	.143

a. Dependent Variable: Networked society

Based on the regression equation above, the following explanation can be obtained:

a = Constant = -2.784

Shows that if the type of work variable has a negative constant value, then the type of work variable is -2,784. Whereas in the analysis carried out on the Type of Work on the formation of a Networked community which was carried out using the SPSS 22 Program in the F test results table above, a significance level of 0.143 > 0.05 was obtained, which means that there was no influence between the Type of Work on the formation of a networked society. In this study, the type of community work did not have a significant effect on the formation of a networked society during the Covid-19 period. This means that the type of community work does not have an important contribution to the formation of a networked society. The type of work variable measured in this study shows that the type of community work does not have a positive influence on the formation of a networked society during the Covid-19 era.

Health Protocols with Networked Communities

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	82.412	6.403		12.872	.000
	Health protocols	-.421	1.790	-.022	-.235	.815

a. Dependent Variable: Networked society

Based on the regression equation above, the following explanation can be obtained:

a = Constant = -.421

Shows that if the Health Protocol variable has a negative constant value, then the Health Protocol variable has a value of -.421. Whereas in the analysis conducted on the Health Protocol on the formation of a Networked community which was carried out using the SPSS 22 Program in the F test results table above, a significance level of 0.815 > 0.05 was obtained, which means that there was no influence between the Health Protocol on the formation of a networked society.

In this study, the Public Health Protocol did not have a significant effect on the formation of a networked society during the Covid-19 period. This Public Health Protocol does not have an important contribution to the formation of a networked society. The Health Protocol variable measured in this study shows that the Health Protocol did not have a positive effect on the formation of a networked society during the Covid-19 era.

Income to Networked Communities

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	62.901	3.573		17.605	.000
	income	6.504	1.192	.449	5.459	.000

a. Dependent Variable: Networked society

Based on the regression equation above, the following explanation can be obtained:

a = Constant = 1.192

Shows that if the Income variable has a constant value, then the Income variable is worth 1,192. Whereas in the analysis carried out on Income on the formation of a Networked community which was carried out using the SPSS 22 Program in the F test results table above, a significance level of 0.000 <0.05 was obtained, which means that there is an influence between Income on the formation of a networked society.

In this study, income has a positive and significant effect on the formation of a networked society during Covid-19. This means that community income has an important contribution to the formation of a networked society. The income variable measured in this study shows that high community income has positive implications for the formation of a networked society during the Covid-19 period.

Profits and Networked Communities

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	60.529	3.534		17.129	.000
	profit	10.843	1.742	.497	6.226	.000

a. Dependent Variable: Networked society

Based on the regression equation above, the following explanation can be obtained:

a = Constant = 10.843

Shows that if the Profit variable has a constant value, then the Profit variable is worth 10,843. Whereas in the analysis carried out on the advantages of forming a networked community which was carried out using the SPSS 22 program in the F test results table above, a significance level of 0.000 <0.05 was obtained, which means that there is an influence between profits on the formation of a networked community.

In this study, profit has a positive and significant effect on the formation of a networked society in the face of Covid-19. This means that Community benefits have an important contribution to the formation of a networked society. The Profit variable measured in this study shows that high profits have positive implications for the formation of a networked society during the Covid-19 era.

Covid-19, Income, Profits, and Education for Networked Communities

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	42.263	8.609		4.909	.000
	Covid	-.215	.483	-.035	-.446	.656
	income	3.155	1.349	.218	2.338	.021
	profit	7.951	2.001	.365	3.973	.000
	education	1.463	.576	.199	2.541	.012

a. Dependent Variable: Networked society

Based on the regression equation above, the following explanation can be obtained:

a = Constant = 42.263

Shows that if the variables Covid, Income, Profits, and Education simultaneously have a constant value, then the variables Covid, Income, Profits, and Education are worth 42,263. Whereas in the analysis carried out on Covid, Income, Profits, and Education on the formation of a Networked community which was carried out using the SPSS 22 Program in the F test results table above, a significance level of 0.000 <0.05 was obtained, which means that there is an influence between Covid, Income, Profits, and Education towards the formation of a networked society together.

In this study, Covid, Income, Profits, and Education have a positive and significant effect on the formation of a networked society. This means that Covid, Income, Profits and Education of the community have an important contribution to the formation of a networked society. The variables Covid, Income, Profit, and Education measured in this study show that Covid, Income, Profit, and Education have positive implications for the formation of a networked society.

CONCLUSIONS

Based on the results of the existing research and discussion, the conclusions that can be drawn are as follows:

1. The level of education has a positive and significant influence on the formation of a Networked Society.
2. The type of community work does not have a positive and significant influence on the formation of a Networked Society.
3. Implementation of the Health Protocol does not have a positive and significant impact on the formation of a Networked Society.
4. Community income has a positive and significant influence on the formation of Networked Communities.
5. Business profits have a positive and significant influence on the formation of Networked Communities.
6. Covid Indicators, Income, Profits, and Education simultaneously have a positive and significant influence on the formation of a Networked Society.

REFERENCES

Castells, Manuel and Cardoso, Gustavo, eds., 2005. The Network Society: *From Knowledge to Policy.* Washington, DC: Johns Hopkins Center for Transatlantic Relations.

Castells, Manuel dan Maria Isabel Diaz de Isia dalam : http://www.uoc.edu/ in3/ wp/ picwp1201/.

Castells, Manuel. *Bangkitnya Masyarakat berjejaring edisi 2*, (Malden, MA: Blackwell Publishers, Inc.2009).

Castells, Manuel. 2010. *The Rise of the Network Society, Second edition With a new preface.* John Wiley & Sons Ltd publicated, United Kingdom.

Dijk , Jan AGM Van . *Masyarakat berjejaring: Aspek Sosial Media Baru,2* (London, California, New Delhi, Singapura, SAGE Publications Ltd,1999)

Fuches, Christian. 2007. *Internet and Society: Social Theory in the Information Age*. Taylor & Francis e-Library.

Mc Luhan, Marshal. 2003 "*Technology Determinism*", In *A First Look at Communication Theory*, Fifth Edition, by EM Griffin, New York, McGraw Hill.

Suyono. 2018. *Analisis Regresi untuk Penelitian.* Yogyakarta : Deepublish.