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# **Impact of Community Compliance in Obedience with the Health Protocol on the Economic Community of West Nusa Tenggara**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

The goal of this study was to find out how the economy of the community in West Nusa Tenggara Province was affected by people following health rules. In this study, 100 people from the West Nusa Tenggara Province took part. The method for getting data is by giving out questionnaires. Path analysis is used in the data analysis method. SmartPLS software is used to do this. Direct infrastructure does not affect the community's economy with community compliance in adhering to health protocols as a mediating variable, but knowledge does, with community compliance in adhering to health protocols as a mediating variable. It's not the infrastructure that makes people in West Nusa Tenggara more likely to follow the health and economic rules they have. When the people of West Nusa Tenggara follow health rules, that has an impact on their economy.

*Keywords: Community compliance; health protocol; economic community.*

## **1. INTRODUCTION**

Since the end of 2019, the world has been shocked by the spread of coronavirus disease

2019 or often known as COVID-19. This virus was first identified in Wuhan, China. COVID-19 was originally transmitted from animals to humans, but it is undeniable that COVID-19 can

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be transmitted from humans to humans. The existence of COVID-19 has made the Indonesian government take a policy that people are advised not to carry out activities outside the home, this is done to avoid the spread of COVID-19. The Indonesian government has made efforts to suppress positive cases of this virus, including social distancing, large-scale social restrictions (PSBB), and the implementation of restrictions on community activities (PPKM). The existence of this policy is expected to reduce the impact of the economic crisis [1,2]. The existence of this policy affects the economic activities of the people in Indonesia by limiting the community's space for movement,

The existence of these policies requires the public to obey health protocols in suppressing the spread of COVID-19. In terms of suppressing compliance in the spread of COVID-19, the government must provide knowledge to the public regarding what is COVID-19, tips, and tricks to avoid COVID-19, and the impact if someone is exposed to this COVID-19. Having good knowledge about preventing the transmission of COVID-19 will increase awareness and understanding of the importance of preventing the transmission of this disease. Then the government also needs to prepare infrastructure as a support in dealing with this virus. To behave in a healthy manner, it requires supporting infrastructures such as a place to wash hands and soap/hand sanitizer and there is a distance limit available in seating or public places [3].

It is undeniable that people in West Nusa Tenggara Province have also been affected by the COVID-19 outbreak. Since mid-March 2020, when the first COVID-19 patients appeared in West Nusa Tenggara, the government has begun to take actions, including an appeal to avoid crowds to maintain health with a clean and healthy lifestyle, and reduce activities outside the home. The existence of this COVID-19 also has an impact on the economy of the community, the income received has decreased but can still meet daily needs, employment is limited, expenditure is greater and is dominated by the purchase of food ingredients. Purchases made online are the choice of the community, both those who live in rural and urban areas [4].

## **2. LITERATURE REVIEW**

### **2.1 COVID-19**

COVID-19 is a disease caused by the SAR-CoV-2 virus, which has symptoms like the common

cold, which can progress to severe pain and inflammation of the lungs, causing difficulty breathing. Some steps to protect yourself during this pandemic include maintaining hand hygiene through diligently washing hands with soap and running water or using hand sanitizers, keeping a distance from other people, avoiding touching the face, especially the eyes, nose, and mouth because these parts are the entryway. virus into the body, then maintain respiratory hygiene by covering the mouth and nose with a tissue or elbow when coughing and sneezing, if you experience symptoms of fever, cough, and difficulty breathing, seek medical care immediately and follow the advice given by your local health care provider [5].

### **2.2 Community Obedience in Obeying Health Protocols**

Obedience according to the Big Indonesian Dictionary is obedience, loyalty, piety. Where obedience is receiving orders from someone in any form as long as the person receiving the order shows obedient behavior. The existence of obedience shows an attitude and behavior from several aspects including trusting, accepting, and doing something at the request of others [6]. Obedience in implementing health protocols is expected to prevent the spread of COVID-19 infection which is increasingly widespread in the community. The best way to prevent the disease is to break the chain of spread of COVID-19 through isolation, early detection and basic protection, namely protecting yourself and others by washing your hands frequently using running water and using anti-septic soap and using hand sanitizer. using a mask and not touching the face area before washing hands, and applying coughing and sneezing etiquette properly and correctly [7].

### **2.3 Knowledge**

According to Simanjuntak, et al. [8] Knowledge is one of the important things in the context of handling the transmission of the spread of COVID-19. The existence of knowledge possessed will influence a person in determining and taking an attitude towards a problem at hand. Knowledge is also the most important domain in shaping one's behavior. These behaviors can be learned and observed. In Indonesia, in the case of COVID-19 in the new normal era, public knowledge about health protocols is very much needed as the basis for the community in showing COVID-19 prevention

behavior. Someone who has high knowledge will have better behavior than people who have low knowledge, so people with a high level of knowledge tend to have a greater chance of doing good behavior [9].

## 2.4 Infrastructure

Infrastructure is one of the supporting factors of community compliance in carrying out health protocols. The existence of infrastructure plays an active role in preventing the transmission of COVID-19, starting from the availability of hand washing places, anti-septic soap, hand sanitizers, social distancing limits, masks, health workers, hospitals and other supports. With the availability of infrastructure, the level of community compliance in complying with health protocols is also good [10].

## 2.5 Economy

The existence of an economy can provide opportunities for humans to fulfill their daily needs such as food, drink, clothing, shelter, and others. Economic growth is also a factor that supports national development in a country. Good economic growth will be able to increase national development [11]. The importance of the economy in people's lives demands that the state regulates policies regarding the economy and guarantees the economy of its citizens who proclaim themselves a welfare state (welfare staat). The existence of good economic growth supports the national development of a country, so that good economic growth will be able to increase national development [12].

## 2.6 Previous Research

Several previous studies including Putra and Manalu showed that knowledge has a significant relationship to behavior in carrying out health protocols, where the level of public knowledge about COVID-19 is in the high category and for community behavior is in the good category. Then Purba, et al. the results of their research show that there is a relationship between facilities and infrastructure with the level of patient compliance with health protocols in preventing COVID-19, with good facilities and infrastructure, the level of compliance with health protocols in preventing COVID-19 is also good. Furthermore, Sayuti and Hidayati where the answers of most of the respondents stated that the income received had decreased but could still meet their daily needs, employment was

limited, expenditure was greater and was dominated by the purchase of food ingredients. Purchases made online are the choice of the respondents.

## 3. METHODOLOGY

This type of research is quantitative research. The location of this research was carried out in West Nusa Tenggara Province which consists of 10 regencies/cities namely West Lombok Regency, Central Lombok Regency, East Lombok Regency, North Lombok Regency, West Sumbawa Regency, Sumba Regency, Dompu Regency, Bima Regency, Mataram City, City of Bima. As for determining the sample in this study using the Rao formula with the formula:

$$n = \frac{Z^2}{4 (moe)^2}$$

$$n = \frac{1,96^2}{4 (0,1)^2}$$

$$n = 96$$

### Description:

N = Number of samples

Z = The level of confidence required in determining the sample 95% = 1.96

Moe = Margin of error or maximum error that can be tolerated, usually 10%

From the calculation above, it can be seen that the number of samples used in this study were 96 people. To facilitate the research, the researchers took a sample of 100 respondents. Collecting data using a questionnaire. The indicators for the community obedience variable are washing hands using water and anti-septic soap, avoiding touching the facial area, implementing sneezing etiquette, avoiding crowds, avoiding physical contact, using masks when outside the home, carrying and using hand sanitizers, limiting oneself using public transportation. , strive to always be at home, exercise regularly, and get enough rest. For the knowledge variable using indicators: knowing the symptoms of COVID-19, knowing how to transmit COVID-19, knowing how to prevent COVID-19, knowing government programs about COVID-19, and updating the development of information related to COVID-19. Then for the variables of facilities and infrastructure, it is measured by indicators: the availability of hand washing facilities, the availability of soap/hand sanitizer, the availability of social distancing limits, and the

availability of masks. Finally, for the economic variable, it is measured by income received, spending patterns for daily life, availability of jobs, and new online shopping habits. In this study using a Likert scale with a rating weight of 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, 5 for strongly agree.

To analyze the data using path analysis using SmartPLS software. As for the path analysis includes a construct validity test which consists of convergent validity, and discriminant validity, then the construct reliability test is carried out. Furthermore, the evaluation of the structural model (inner model). Finally, the hypothesis is tested, both direct and indirect effects.

## 4. RESULTS AND DISCUSSION

### 4.1 Construct Validity Test

To test the construct validity in this study, two tests were used, namely the convergent validity test where an instrument was declared valid if it had an outer loading value above 0.50, otherwise the instrument was declared invalid if it had an outer loading value below 0.5. Then a discriminant validity test is conducted where an instrument is declared valid if the correlation between a construct (variable) and other

indicators shows that the latent variable predicts the size of their block better than the other blocks.

#### 4.1.1 Convergent Validity

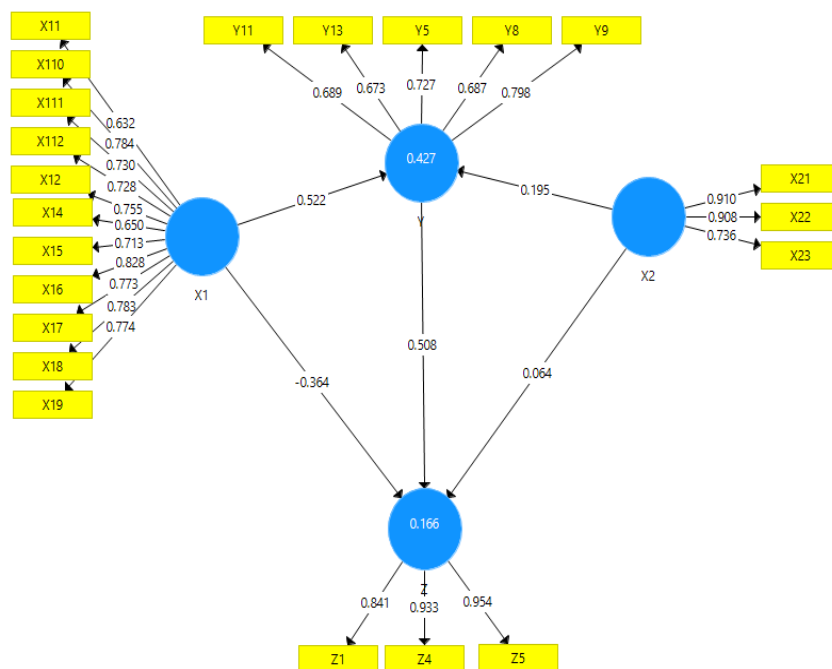
Below, the results of the convergent validity test are presented as seen from the loading factor value.

Based on the table above, there are loading factor values that are less than 0.6, namely X13, Y1, Y2, Y3, Y4, Y6, Y7, Y10, Y12, Y14, Y15, Z2, Z3, Z6, so that these indicators are excluded from the model. By removing an indicator whose loading factor value is less than 0.6, a new loading factor value is obtained as shown in the image below.

#### 4.1.2 Discriminant validity

The results of the discriminant validity test are listed in the table below.

Based on the table above, it can be seen that all loading indicators on the construct are greater than the value of the cross-loading so that all statements are declared valid. Another measure is seen from the HTMT value.



**Fig. 1. Loading Factor Model**  
Source: Processed Data (2021)

**Table 1. Loading Factor**

	<b>Knowledge</b>	<b>Infrastructure</b>	<b>Community Obedience</b>	<b>Community Economy</b>
X11	0.639			
X12	0.759			
X13	0.501			
X14	0.661			
X15	0.722			
X16	0.813			
X17	0.770			
X18	0.790			
X19	0.769			
X110	0.785			
X111	0.721			
X112	0.720			
X21		0.899		
X22		0.895		
X23		0.764		
Y1			0.401	
Y2			0.556	
Y3			0.544	
Y4			0.368	
Y5			0.696	
Y6			0.158	
Y7			0.526	
Y8			0.640	
Y9			0.733	
Y10			0.441	
Y11			0.644	
Y12			0.519	
Y13			0.606	
Y14			0.538	
Y15			0.369	
Z1				0.771
Z2				0.011
Z3				0.403
Z4				0.799
Z5				0.839
Z6				0.590

Source: Processed Data (2021)

From the table above, it is obtained that all HTMT values are less than 0.9 so that all construction variables are valid with discriminant validity.

#### 4.2 Construct Reliability Test

Below is a table of construct reliability test results.

Based on the table above, it can be seen that the value of Cronbach's alpha and composite reliability of all variables in this study is more than 0.7 so it can be concluded that the variables used by the researcher are declared reliable.

#### 4.3 Structural Model (Inner Model)

Below is an evaluation table for the inner model.

**Table 2. Cross loading**

	<b>Knowledge</b>	<b>Infrastructure</b>	<b>Community Obedience</b>	<b>Community Economy</b>
X11	0.632	0.284	0.347	0.057
X12	0.755	0.291	0.345	-0.122
X14	0.650	0.304	0.304	-0.074
X15	0.713	0.387	0.353	-0.147
X16	0.828	0.525	0.583	-0.015
X17	0.773	0.521	0.444	-0.054
X18	0.783	0.382	0.410	-0.062
X19	0.774	0.431	0.600	0.105
X110	0.784	0.410	0.527	0.063
X111	0.730	0.521	0.509	0.022
X112	0.728	0.517	0.551	0.054
X21	0.468	0.910	0.449	0.129
X22	0.497	0.908	0.454	0.095
X23	0.529	0.736	0.361	0.037
Y11	0.409	0.458	0.689	0.198
Y13	0.564	0.285	0.673	0.119
Y5	0.442	0.392	0.727	0.297
Y8	0.377	0.187	0.687	0.215
Y9	0.461	0.418	0.798	0.273
Z1	0.111	0.164	0.304	0.841
Z4	-0.079	0.069	0.245	0.933
Z5	-0.021	0.073	0.304	0.954

Source: Processed Data (2021)

**Table 3. Value of HTMT**

	<b>Knowledge</b>	<b>Infrastructure</b>	<b>Community Obedience</b>	<b>Community Economy</b>
Knowledge				
Infrastructure	0.658			
Community Obedience	0.722	0.616		
Community Economy	0.132	0.127	0.376	

Source: Processed Data (2021)

**Table 4. Construct reliability test results**

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>
Knowledge	0.919	0.931
Infrastructure	0.812	0.89
Community Obedience	0.762	0.84
Community Economy	0.896	0.936

Source: Processed Data (2021)

**Table 5. Inner Model Evaluation Results**

<b>Description</b>	<b>R-Square Value</b>	<b>Category</b>
Community Obedience	0.427	Weak
Community Economy	0.166	Weak

Source: Processed Data (2021)

Based on the table above, the R-Square value for the community obedience variable is 0.427 and the community economy variable is 0.166. It can be concluded that the variable of community obedience can be explained by the variable of knowledge and infrastructure in the model of 42.7% in the weak category. Then the variable of the community's economy can be explained by the variables of knowledge, infrastructure, and community obedience in the model of 16.6% which is also included in the weak category. In terms of measuring how well the model predicts the community's economy, it can be seen from the prediction relevance value (Q-Square) as below.

$$Q2 = 1 - (1-R12) - (1-R22)$$

$$Q2 = 1 - (1-0.4272) - (1-0.1662)$$

$$Q2 = 1 - (0.818) (0.972)$$

$$Q2 = 0.205$$

So that the prediction relevance value (Q-Square) in predicting the community's economy is 0.205 or 20.5%.

#### 4.4 Direct Influence

Below are presented the results of the direct influence hypothesis test.

Based on the table above, it can be seen that there is a significant value in the knowledge

variable of 0.000 or less than 0.05 so it can be concluded that knowledge affects people's obedience, the same thing is that knowledge affects the community's economy because the significance value is less than 0.05. However, it is different from the results of research on the infrastructure variable, where infrastructure does not affect community compliance due to the significant value of 0.113 or more than 0.05. Likewise, the relationship between infrastructure and the community's economy. Where infrastructure does not affect the community's economy because it has a significant value of 0.596 or more than 0.05.

#### 4.5 Indirect Influence

Below are presented the results of the indirect effect hypothesis test.

Based on the table above, knowledge affects the community's economy by being mediated by the community's obedience in complying with health protocols, this is because it has a significant value of 0.002 or less than 0.05. However, infrastructure does not affect the community's economy with community obedience as a mediating variable, this is because the significance value is more than 0.05, namely 0.154.

**Table 6. Direct effect hypothesis test results**

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Decision
Knowledge affects people's obedience	0.522	0.521	0.102	4.340	0.000	Received
Knowledge affects the community's economy	-0.364	-0.382	0.102	3,568	0.000	Received
Infrastructure has an effect on obedience Public	0.195	0.205	0.123	1,588	0.113	Rejected
Infrastructure facilities affect the community's economy	0.064	0.054	0.121	0.530	0.596	Rejected
Community obedience affects the economy of the community	0.508	0.532	0.100	5.065	0.000	Received

Source: Processed Data (2021)

**Table 7. Results of Indirect Effect Hypothesis Testing**

<b>Hypothesis</b>	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>P-Values</b>	<b>Decision</b>
Knowledge affects the community's economy by mediating community obedience	0.265	0.278	0.087	3.046	0.002	Received
Infrastructure facilities affect the community's economy by mediating community obedience	0.099	0.108	0.069	1.426	0.154	Rejected

Source: Processed Data (2021)

There is knowledge by respondents regarding the spread of COVID-19, prevention so as not to be exposed to COVID-19 to handling COVID-19 quite well. Make people obey in complying with health protocols. However, it is undeniable that the COVID-19 pandemic has also affected the economy of the people in West Nusa Tenggara, starting from the level of income, limited employment opportunities, to the habit of shopping online to meet the basic needs of the community. Research result shows that as many as 37% of respondents answered agree and 34% answered strongly agree that the existence of government policies related to PPKM and PSBB affects their income. Then as many as 13% of respondents answered strongly disagree and 35% answered disagree related to the ease of getting a job during a pandemic. This proves that during the pandemic, it is not easy for people to find work. And as many as 42% of respondents answered agree and 18% answered strongly agree, that they choose to shop online to meet their needs, rather than they have to leave the house.

## 5. CONCLUSION

Based on the results of the research above, knowledge indirectly affects the community's economy with community compliance in complying with health protocols as a mediating variable, but indirectly infrastructure does not affect the community's economy with community compliance with community compliance in complying with health protocols as a mediating variable. Knowledge directly affects community

compliance in complying with health protocols and the economy of the people of West Nusa Tenggara, but infrastructure does not affect community compliance in complying with health protocols and the economy of the people of West Nusa Tenggara. Then the community's obedience in complying with health protocols directly affects the economy of the people of West Nusa Tenggara. To overcome the problems faced by the community during this pandemic, it is recommended for the government to relatively increase employment opportunities that do not have a high risk of spreading COVID-19 and it is necessary to increase public knowledge and add and maintain supporting infrastructure in preventing the spread of COVID-19.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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