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THE EFFECT OF COVID-19 OUTBREAK TO PANIC BUYING BEHAVIOUR IN INDONESIA

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Abstrat This tudy proposes and examines the model of conceptual in order to settle research gaps on the effect of Covid-19 outbreak to panic buying in Indonesia analyzed with social media variable, social distancing policy, supply disruption as well as knowledge variable as the mediation variable. Data were collected from the people of Indonesia through google form with its time of deployment starting from 1 – 5 April 2020 and the age limit at least 17 yrs old. In total of 275 response were obtained from the respondent of this study with sampling technique of PLS. The primary finding of this research is that panic buying behavior is affected by supply disruption, in other hands social media and social distancing policy causes the society to obtain knowledge about the pandemic of Covid-19 thus it's not affecting the panic buying behavior.

Keywords: Social media, social distancing policy, supply disruption, knowledge, and panic buying behavior.

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INTRODUCTION

The world was shocked by the presence of the coronavirus disease (COVID-19) and since it was declared as a global health emergency (WHO, 2020), the media have been continuing to highlight the development of the spread on the virus thus it has attracted the attention of people around the world, including Indonesia. This is because the development of communication technology has also increased as well, making social media as a growing too rapidly as a result of the spread on information about COVID-19 with various content and news information spreading rapidly, therefore the role of social media as public support is expected to spread information and the truth is sometimes too excessive, causing high expectations and may turn into a source of disappointment and spread of rumors, as a result people face various levels of psychological pressure which also need to be addressed due to information disseminated by social media (Pan et.al., 2020).

Although information disseminated through social media is not only a matter of knowledge about the current epidemic (Hong & Collins, 2006; Blendon et.al., 2004), the media also plays a role in influencing public perceptions of the epidemic (Young et.al., 2008).), therefore when consumers do not have the knowledge and experience of a risk, they will create their perceptions through the media (Kasperson et.al., 1988). As a result, a change in the situation from a calm phase to a panic phase in society can occur without going through a transitional stage (Saadatian-Elahi et.al., 2010). The panic and fear caused by the threat of infectious diseases can risk disrupting economic and social activities in society (Bloom & Cadarette, 2019). Therefore, knowledge possessed by a person as awareness of information will affect one's perception and ultimately will influence behavior in the purchase decision process (Wilson, 2002). This is because a person's feelings about risk are a subjective assessment, where each individual has his or her own uniqueness in character and behaves towards certain risks. This behavior arises from factors such as personal values, social and cultural background, gender and education, or a combination of these factors. (Lau et.al., 2006; Chang et.al., 2004).

With the spread of COVID-19 that occurs in society, negative perceptions emerge and have an impact on consumer purchases and several other behaviors in an effort to reduce the risk of infection (Jung et al., 2016), such as consumers will refrain from traveling and / or

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traveling as well as avoiding public places (Lee & McKibbin, 2004), an increase in demand for health products (Monaghan, 2003), and even panic buying (Altstedter & Hong, 2020). All of these behaviors can occur because of the influence of information disseminated through social media about the global spread of COVID-19 (INSEAD Knowledge, 2020). In addition, changes in consumer behavior occurred due to uncertainty about the scale of the epidemic which was caused by the transmission of the COVID-19 disease. Especially with the actions taken by governments in the world and even in Indonesia by issuing policies that aim to reduce the transmission of a virus known as social distancing, which causes the cancellation of international flights. In addition, there have been decisions taken by several countries to prohibit immigrants from entering their territories and to evacuate their citizens who are abroad (Al-Jazeera, 2020), but also have an impact on trafficking through behavior arising from social distancing calls - including closings in several places such as schools, restaurants, shopping centers, sports venues, etc. (European Center for Disease Prevention and Control, Stockholm, 2020) which continues to be echoed by social media in order to prevent the spread of the virus.

Regarding the influence of social media on consumer purchasing decisions, such as those spread on social media, in several countries such as Singapore, photos showing empty shop shelves flood the social media there, as well as in Malaysia, as well as other countries affected by COVID-19. Not only that, other photos showing long queues of consumers buying daily necessities in large quantities - which can be said to be excessive - are also widespread after the country and / or city raises its alert level from yellow to orange (INSEAD Knowledge , 2020). This of course made the people who saw this become anxious, worried, and panicked, so they thought of doing the same thing. Meanwhile, the impact that occurred in Indonesia itself, namely the soaring demand for staple foods caused some local traders to double their regular prices (INSEAD Knowledge, 2020), this condition is known as panic buying which was triggered by information scattered on social media about the global spread of COVID. -19. Even today, there is a lot of information from social media that can trigger consumer behavior in purchasing decisions. Two of them, namely information regarding social distancing policies which consist of stay-at-home recommendation, closure of educational institutions, mass gathering cancellation, and cordon sanitaire / mandatory quarantine of a building or residential area (s) (European Center for Disease Prevention and Control, Stockholm, 2020); and estimates of the occurrence of supply disruption (Shou et.al., 2013; Snyder et.al., 2010), which consists of stock-outs, supply shortages, and stockpiling of products (Shou et.al., 2013; Yoon et .al., 2017), so that when they feel a supply shortage will occur, panicked consumers will immediately buy as many products as possible to anticipate supply disruption, which will lead to product stockpiling. Based on the descriptions presented, the purpose of this study is to propose and test a conceptual model to solve research gaps on the effect of Covid-19 outbreak to panic buying through social media variables, social distancing policies, supply disruption and knowledge variables as a mediating variable.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Social Media, Social Distancing Policies, and Supply Disruption Against Knowledge

With the development of advances in communication technology in the world, making the internet and social media a part of life The presence of social media as a facility to share information and knowledge without boundaries for people around the world (Choi & Lee, 2017; Tang et al., 2016; Yadav & Rahman, 2017, Yang, 2018) is considered to have removed temporal and geographic barriers on social interaction and communication (Chang & Chuang, 2011), which makes social media possible for news information around the world to spread quickly (Kass-Hout et al., 2013).

While the world is excited about the spread of the Covid-19 epidemic in several countries, social media plays a major role as a tool to share information about the current situation from around

the world - one of which is the impact of the spread of the epidemic - and as a tool to increase public awareness about the importance of health. With its role as a means of sharing information, social media is often used to educate the public so that people have a reference for coping with this situation (Akram & Kumar, 2017). However, the ease of disseminating information on social media can also be a problem in society because the variety of information available, both positive and negative, comes from trusted or not trusted sources. The emergence of negative information and from sources that do not have credibility can be caused by the missing information from the media filter (Lunn et al., 2020). This then results in the role of social media, which should be able to direct people's perceptions and behavior in a positive direction, instead causing panic and uncertainty in the midst of society (Kilgo et al., 2018; Lunn et al., 2020), thus it can have an impact on economy and society.

Likewise, with the government's role in anticipating the spread of Covid-19, the government issued a "Social Distancing" policy. Social distancing is an action taken to minimize contact between potentially infected individuals and healthy individuals, or between populations with high transmission rates and populations with low or no transmission. In addition to aiming to reduce disease transmission, social distancing is also expected to help ease the task of health services, given the large number of cases that occur due to the disease (Anderson et al., 2020).

Some of the movements carried out are related to social distancing (European Center for Disease Prevention and Control, Stockholm, 2020), among others;

a. Stay-at-home recommendations, namely inviting the public to stay away from interactions with other people, especially with groups that have a high risk of transmission.
b. Closure of educational institutions, this step is carried out because universities, schools, and other educational facilities are one of the places where large numbers of people gather and interact, so this step is expected to prevent people from contracting diseases.
c. Mass gathering cancellations, this step is done by eliminating activities and events that involve large numbers of people.
d. Cordon sanitaire / mandatory quarantine of a building or residential area (s), this step aims to limit contact between areas with high transmission rates and areas with low transmission rates or areas with no transmission at all. This step is carried out by implementing quarantine or closing of buildings or entire residential areas, which is done to maximize social distancing.

The existence of this policy caused a response and concern in the community that public facilities would be closed due to the implementation of social distancing and as an effort to minimize the risk of supply shortage in the future. Therefore, the authorities (and other parties) must be able to communicate risks such as COVID-19 to the public as precisely as possible so that there are no misunderstandings in the community due to confusing information and reporting without clear credibility and facts. Therefore, in this study three hypotheses are proposed, including;

H_1: Social media affects Knowledge
H2: Social distancing policy affects knowledge
H3: Supply disruption affects knowledge

Knowledge on panic buying behavior

Decision making is not only a cognitive process that involves knowledge and information, but is also significantly influenced by emotions, such as anxiety, fear, anger, and other emotional reactions (Peter & Olson, 2004; Crilly et al., 2004; Trandafilovic et al. , 2013; Vogelbacker et al., 2014; Huynh et al., 2016). Therefore, in behaving as a result of a response to illness, a person will consider two types of information, including (1) local information (i.e., information taken locally only to be communicated through social connections, and (2) global information (depending on factors). extrinsic / normative) (Epstein et al., 2008; Funk et al., 2010; Perra et al., 2011; Meloni et al., 2011; Durham & Casman, 2012; Evans et al., 2013).

In general, knowledge is seen as awareness of information. In addition, knowledge is defined as what we know: knowledge that involves the process of mental understanding, understanding that takes place only in the mind even though it involves interactions with the world outside the mind and interactions with other people (Wilson, 2002). Knowledge is acquired by involving complex cognitive processes in the form of perception, communication, and reasoning. Hence one has the point of view that one is truly incapable of knowing anything without words to describe it, and therefore knowledge is tied exclusively to information. Knowledge, apart from being composed of data and information, can also be considered as a much greater understanding of situations, relationships, causal phenomena, and the theories and rules (both explicit and implicit) that underlie certain problems.

In the case of COVID-19, risk assessment is still very difficult to do because objective knowledge about this disease is still developing (Timsit, 2020). The spread of COVID-19 so far has been accompanied by a lot of uncertainty and contradictory information. When people get different advice from multiple sources, they have a greater instinct to prepare (albeit excessively) than to be under-prepared or even absent.

Related to this, the two items most affected by panic buying because many people choose to buy as an effort to prepare themselves (Nielsen, 2020; Meyer, 2020), namely: (1) health products, such as hand sanitizers and medical masks; (2) shelf-stable foods, such as canned foods and dry foods that can be stored for a long time, if the situation has not subsided in the near future. Panic buying is a phenomenon that people often find when they are faced with the possibility of a disaster imminent, be it a natural disaster or other disasters such as the spread of viruses that do not have effective treatment or vaccines (Grohol, 2020). Panic buying itself is characterized by a rapid increase in the volume of purchases, usually causing the price of an item to increase (Chen, 2020). Therefore, in this study proposed a hypothesis, namely;
H4: Knowledge affects panic buying behavior

Social media, social distancing policies and supply disruption on panic buying behavior

Coronavirus has caused instability around the world. Responding to these changes, people then adapt by making different decisions in behavior. One of them is protective action when facing the threat of virus transmission and health problems. Their adjustment behavior is what can then have a huge social and economic impact (Murphy et al., 2020), as in the affected areas, drastic changes in consumer behavior, such as large purchases, have seen drastic changes in consumer behavior. This leads to hoarding behavior, where one of the strongest predictors is a person's inability to tolerate difficult situations such as social isolation as a measure to prevent the spread of the virus (Norberg & Rucker, 2020; European Center for Disease Prevention and Control, 2020). This situation risks prompting a person to decide to prepare for a changing situation by buying more of the product than they have been used to

Hoarding due to the prediction of a disaster or as a step through an ongoing disaster tends to be self-oriented and is a planned behavior dominated by a person's desire to minimize risk (Sheu & Kuo, 2020). Hoarding can also occur in people when their intuition, their emotional side - driven by anxiety, fear, and panic - believes there is reason to do so due to temporary factors, such as a large degree of price change for a particular product or a future shortage of supply. Meanwhile, emotions can be transmitted when a person observes the actions of others and will make him imitate that person's actions. This is because anxiety and worry about food shortages will be more easily transmitted when someone witnesses the actions of others through social media, which, although it feels irrational, these worries still spread there (Grohol, 2020).

Panic buying can be a natural response from individuals who avoid the risk of supply shortage in the future (Shou, et al., 2013; Yoon, et al., 2017) or lack of access to basic necessities due to the implementation of social isolation and / or closure of centers and shopping malls (Savage & Torgler, 2020). In addition, panic buying occurs because information disseminated by social media triggers panic buying in society as a response to circulating information, which can

lead to supply disruption (Lunn et al., 2020). Supply disruption itself is an unexpected event that disrupts the normal flow of goods and / or materials in the supply chain.

Supply disruption is considered a minor failure (Hendricks & Singhal, 2003) which can be caused by many factors, including the complexity of the market supply and the importance of the product purchased (Kraljic, 1983), delays, unavailable, or any other form of disruption (Mohebbi). & Hao, 2008; Tomlin, 2006). Another situation that can trigger someone to do panic buying is when they see a shelf that is almost empty or even completely empty in times of emergency (Norberg & Rucker, 2020), and there are long lines of other people making large purchases. (Moosa & Ramiah, 2017).

Supply disruption and panic buying are closely related to each other, namely (1) ongoing supply disruption can lead to panic buying because by panic buying, consumers believe that they have taken the necessary actions to avoid the risk of future supply disruption estimates. ; and (2) panic buying carried out by consumers on a large scale can cause supply disruption, because the demand for products is very high resulting in an out of stock, which will trigger greater panic buying in the future (Shou et al., 2013) .

Based on the explanation above, there are three hypotheses including;

H5: social media affects panic buying behavior
H6: social distancing policy affects panic buying behavior
H7: Supply disruption affects panic buying behavior

Social Media, Social Distancing Policies, and Supply Disruption on Panic Buying Behavior Through Knowledge

Social media is a medium that involves interactive participation (Manning, 2014), which plays an important role in changing people's lifestyles. With the existence of social media (including social networking sites and blogs) people can easily connect with each other (Siddiqui & Singh, 2016). In addition, social media also plays a role in facilitating anyone to publish, access, and / or exchange the latest information.

There are two characteristics commonly used to define social media. (1) social media allows for some form of participation, so it can be argued that social media is never completely passive. (2) in line with its participatory nature, every post posted on social media always allows the initiation of an interaction, which involves friends, family, or acquaintances as well as new people who have similar interests or social circles (Manning, 2014).

The existence of social media so that the spread of information about COVID-19 is increasingly spreading with various models and news contents that affect one's perception of COVID-19. In addition, because the spread of disease can trigger economic and social disruption, including panic, stockpiling of medical supplies, or violence against group members who are believed to have the potential to transmit disease (Zarocostas, 2010; Kinsman, 2012). The spread of an epidemic does not only have a direct impact through the epidemic itself, such as death and unhealthy conditions (mortality and morbidity), but can also have an indirect impact through behavior in responding to the epidemic (Kinsman; 2012; Ogoina, 2016). Humans respond to crises in various ways. When faced with uncertain and risky situations in which we have no control, people try whatever they can to feel they have control over the situation (Meyer, 2020).

An increased social response spreads through two mechanisms: (1) if an illness is new to an area or is considered to be very threatening, the influence of the media will spread concern to the public; and (2) when communicating with others, a person tends to adapt the opinion of the person who is more worried than the person who is calmest. For example, during the SARS outbreak, people's anxiety shaped behavior, including many who wore masks and stayed at home (not working or school) and some were involved in panic buying (Cheng, 2004).

Fear often creates a big impact during the spread of epidemics (Kinsman, 2012; Ogoina, 2016). Incorrect information can trigger fear and create a high risk of behavior (Bali et.al., 2016). People can panic due to the lack of information. In addition, panic buying also occurs

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because of an appeal not to panic from the government which is spreading through media, including social media. The appeal is sometimes seen as an attempt by the government to cover up the bad situation in order to avoid public panic that allows chaos everywhere.

Panic buying and hoarding food, and other essential items, are common in areas where there is extreme scarcity of goods, are facing disasters and post-disaster, and in situations that raise concerns about uncertainty. Hoarding is considered a rational action when consumers compete for a limited supply in the middle of an uncertain situation or limited supplies (Sterman & Dogan, 2015). However, hoarding can also be a behavioral and emotional response to a scarce supply. Stock scarcity itself can cause stress, anxiety, fear, or panic, causing people to build up their personal supplies or buy more than they need (Sheu & Kuo, 2020; Grohol, 2020). Based on the foregoing, the following hypothesis is proposed;
H8: social media affects panic buying behavior through knowledge
H9: social distancing policy affects panic buying behavior through knowledge
H10: supply disruption affects panic buying behavior through knowledge

METHOD

Sample and Data Collection

To test the model, this was done by distributing a questionnaire via the Google form by inviting the community to participate in this study based on convenience and volunteering with the distribution time starting from 1 - 5 April 2020. Respondents are Indonesian people with a minimum age limit of 17 years and total 275, so that the sampling technique using convenience sampling. The reason for using convenience sampling is because of its ability to invite respondents who volunteered to participate in this study.

Measurement of Variables

The measures used in this study were adopted and adapted from several studies. For details, see Table 1.
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Table 1 Measurement of Research Variables

Variable	Indicator	Reference
Social media	1. Fill in the content 2. Content credibility 3. Nature of content 4. Content intensity	Chu, 2011; Goh et al., 2013; Vogelbacker et al., 2014; Hautz et al., 2014; Haryani et al., 2015
Social distancing policy	1. Stay at home recommendation 2. Closure of educational institutions 3. Mass gathering cancellation 4. Cordon sanitaire/mandatory quarantine of a building or residential area	European Centre for Disease Prevention and Control, Stockholm, 2020.
Supply disruption	1. Stock outs 2. Supply shortages	Snyder et al., 2010; Shou et al., 2013; Yoon et al., 2017; Sheu and

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	3. Scarcity	Kuo, 2020; Grohol, 2020.
Knowledge	1. Knowledge on Information 2. Tendency to respond to news 3. Knowledge on information sources	Chu, 2011; Chu and Kim, 2011; Aghdaie, 2012; Yang, 2018
Panic buying	1. Hoarding 2. Bulk buying 3. Controlled purchase	Shou et al., 2013; Yoon et al., 2017; Anderson etval., 2020; Altstedter and Hong, 2020; Sheu and Kuo, 2020; Grohol, 2020; Meyer, 2020

Data Analysis

To analyze the objectives of this study, the Partial Least Square (PLS) equation approach is used which consists of two elements, namely the structural model or inner model and the measurement model or the outer model. The inner model shows the relationship between variables, while the outer model describes the relationship between latent variables and indicator variables (Widarjono, 2015). The reasons for using the PLS technique include; (1) compared to ordinary regression analysis, structural equation modeling works with several equations simultaneously, (2) is a powerful method of analysis because it is not based on many assumptions and the data does not have to be normally distributed (Ghozali, 2014). The stages of data analysis included:

1. The design of the structural model (inner model) is the design of the inner model of the relationship between constructs based on the formulation of the problem and the research hypothesis.
2. The design of the measurement model (outer model), namely the indicators of each outer model are relative thus the direction of the arrow in the measurement model is from the construct distance to the indicator.
3. Calculating the evaluation value of the outer model, including:

a. *Convergent Validity*

Testing the validity of variable indicators is calculated based on the outer loading value greater than 0.7. The results of outer loading on convergent validity for each indicator can be seen in Table 2.

Table 2 *Outer Loadings*

Question Indicator	***Knowledge***	***Panic Buying***	***Social Distancing***	***Social Media***	***Supply Disruption***
KNW1	0.888				
KNW2	0.765				
KNW3	0.871				
PBY1		0.721			
PBY2		0.894			
PBY3		0.854			
SCD1			0.844		
SCD2			0.835		
SCD3			0.888		
SCD4			0.826		

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SCM1				0.706	
SCM2				0.784	
SCM3				0.756	
SCM4				0.737	
SPLYD1					0.920
SPLYD2					0.953
SPLYD3					0.937

All indicators on convergent validity are above 0.7, so it can be stated that all question indicators are declared valid.

b. *Discriminant Validity*

Discriminant validity is a relative indicator that can be seen in the cross loadings between the indicator and its construct. The results of cross loadings on discriminant validity can be seen in table 3.

Table 3 Cross Loadings

Question Indicator	***Knowledge***	***Panic Buying***	***Social Distancing***	***Social Media***	***Supply Disruption***
KNW1	**0.888**	0.147	0.251	0.282	0.040
KNW2	**0.765**	0.121	0.215	0.229	0.030
KNW3	**0.871**	0.046	0.181	0.324	0.091
PBY1	0.168	**0.721**	0.220	0.046	0.237
PBY2	0.092	**0.894**	0.191	0.006	0.340
PBY3	0.061	**0.854**	0.123	-0.006	0.343
SCD1	0.189	0.124	**0.844**	0.293	0.356
SCD2	0.189	0.177	**0.835**	0.281	0.199
SCD3	0.259	0.219	**0.888**	0.330	0.248
SCD4	0.221	0.183	**0.826**	0.285	0.314
SCM1	0.235	0.014	0.326	**0.706**	0.095
SCM2	0.302	0.080	0.315	**0.784**	0.115
SCM3	0.211	0.001	0.175	**0.756**	0.040
SCM4	0.222	-0.074	0.210	**0.737**	0.063
SPLYD1	0.084	0.359	0.308	0.093	**0.920**
SPLYD2	0.025	0.366	0.300	0.114	**0.953**
SPLYD3	0.070	0.326	0.302	0.101	**0.937**

c. *Average Variance Extracted* (AVE)

Another method for assessing discriminant validity by looking at the square root of the AVE is whether it is greater than the correlation of constructs with other constructs. AVE results can be seen in table 4.

Table 4 *Average Variance Extracted* (AVE)

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Variable	***Average Variance Extracted* (AVE)**
Knowledge	0.710
Panic Buying	0.683
Social Distancing	0.720
Social Media	0.557
Supply Disruption	0.878

Table 4 shows that the variables used have an AVE value above 0.5 thus they can be declared valid.

d. *Composite Validity*

The construct reliability test is measured by two criteria, namely: Composite Validity and Cronbach's Alpha with the conditions above 0.7. The results of the composite validity test can be seen in table 5.

Table 5 *Composite Validity* and *Cronbach's Alpha*

Variable	***Composite Reliability***	***Cronbach's Alpha***
Knowledge	0.880	0.794
Panic Buying	0.865	0.764
Social Distancing	0.912	0.871
Social Media	0.834	0.738
Supply Disruption	0.956	0.930

The results of the composite validity test show that all variables have a value above 0.7 in Composite Validity and Cronbach's Alpha thus it can be stated that they are reliable.

4. Calculating the Inner Model Evaluation Value

Testing of the structural model is done by looking at the R-Square value. The results of calculating the inner model evaluation value can be seen in Figure 1.

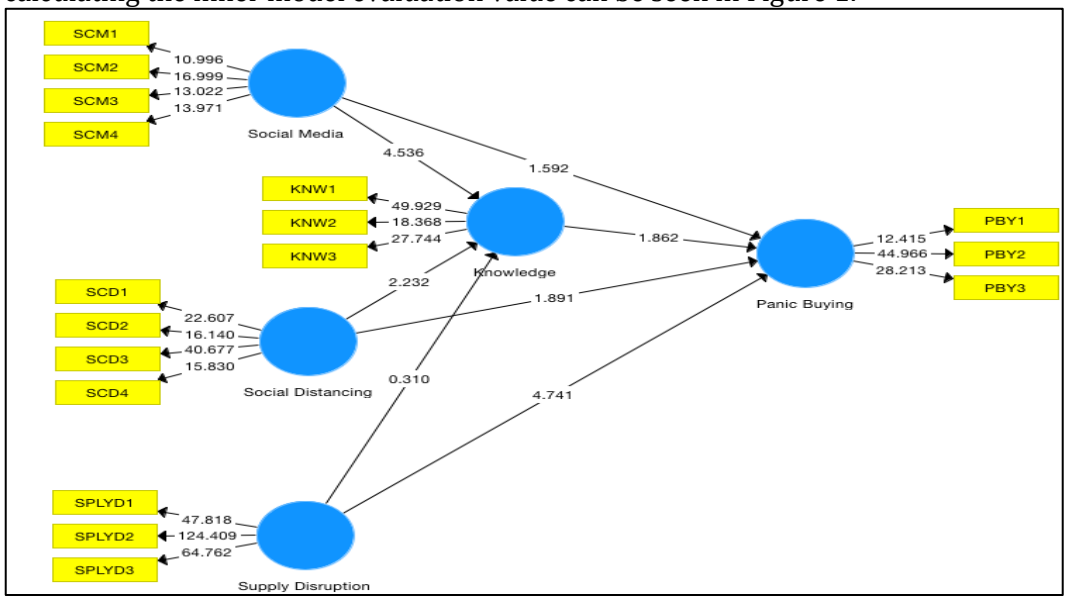

Figure 1.The Inner Model Evaluation Value Calculation Results

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The value of R Square for each variable is used in assessing the PLS model. The results of R Square and the estimation of R Square can be seen in Table 5.

Table 5 *R Square* and *R Square Adjusted*

Variable	*R Square*	*R Square Adjusted*
Knowledge	0.133	0.123
Panic Buying	0.163	0.151

The results of R Square Knowledge and Panic Buying are 0.133 and 0.163, which means that 13.3 percent of the determinants of Social Media, Social Distancing, and Supply Disruption on Knowledge, while the determinant value of Knowledge on Panic Buying is 16.3 percent. The R Square Adjusted result was only 12.3 percent for Knowledge and 15.1 percent for Panic Buying.

RESEARCH FUNDING

The characteristics of the respondents in this study, who volunteered to fill out a questionnaire via Google Form, can be seen in Table 6.

Table 6 Characteristics of Respondents

Characteristics of Respondents	**Note**	**Frequency**	**Percentage (%)**
Sex	Male	97	35.3
	Female	178	64.7
Age	17-22 Yrs. old	46	16.7
	23-28 Yrs. old	80	29.1
	29-34 Yrs. old	36	13.1
	>34 Yrs. old	113	41.1
Type of social media owned	Facebook	211	76.7
	Twitter	97	35.3
	Instagram	222	80.7
	YouTube	163	59.3
	WhatsApp	267	97.1
	Line	111	40.4
	Other	11	4.0
Residence	With family	233	84.7
	Live alone	42	15.3
Domicile	Region of Origin / Birth	197	71.6
	Overseas Areas	78	28.4
Education level	Elementary	1	0.4
	Middle School / equivalent	0	0
	Senior School / equivalent	39	14.2
	Undergraduate	167	60.7
	Postgraduate	45	16.4

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	Graduate	11	4.0
	Other	12	4.4
Occupation	Civil Servant	56	20.4
	Private	102	37.1
	Entrepreneur	48	17.5
	Other	69	25.1
Income Level	<Rp2.000.000	83	30.2
	Rp2.000.000-Rp4.000.000	87	31.6
	Rp4.000.000-Rp6.000.000	33	12.0
	Rp6.000.000-Rp8.000.000	18	6.5
	>Rp8.000.000	54	19.6

Meanwhile, the parameter significance test is used as a hypothesis test to provide information on the relationship between the independent variables and the dependent variable. Hypothesis testing was carried out using the result for inner output value. The hypothesis is accepted if the value of P Value > 0,05. To see the direct effect can be seen in Table 7.

Table 7 *Direct Path Coefficient Effect*

Direct Path	***Original Sample (O)***	***Sample Mean (M)***	***Standard Deviation (STDEV)***	***T Statistics (|O/STDEV|)***	***P Values***	**Note**
Knowledge -> Panic Buying	0.107	0.112	0.058	1.862	0.063	Insignificant
Social Distancing -> Knowledge	0.167	0.178	0.075	2.232	**0.026**	**Significant**
Social Distancing -> Panic Buying	0.107	0.107	0.057	1.891	0.059	Insignificant
Social Media -> Knowledge	0.275	0.279	0.061	4.536	**0.000**	**Significant**
Social Media -> Panic Buying	-0.095	-0.101	0.059	1.592	0.112	Insignificant
Supply Disruption -> Knowledge	-0.020	-0.023	0.066	0.310	0.756	Insignificant
Supply Disruption -> Panic Buying	0.344	0.351	0.072	4.741	**0.000**	**Significant**
Social Distancing -> Knowledge -> Panic Buying	0.018	0.020	0.015	1,207	0.228	Insignificant
Media Social -> Knowledge -> Panic Buying	0,029	0.031	0.017	1,707	0.088	Insignificant
Supply Distruption -> Knowledge -> Panic Buying	0,002	0.003	0.009	0,254	0.800	Insignificant

Based on Table 3, it can be explained that of the 10 hypotheses proposed, 3 hypotheses were accepted, then 7 hypotheses were rejected. The accepted hypothesis included; H1: social media affects knowledge, H2: social distancing policies affect knowledge, and H6: supply

disruption affects panic buying. While the rejected hypotheses were H3, H4, H5, H7, H8, H9 and H10.

DISCUSSION

Quoted from the Coronavirus Distribution Map (Google, 2020), until today, April 8, 2020 at 13:32, the spread of the coronavirus (COVID-19) worldwide has been confirmed to have reached 1,430,453 cases, where cases per one million were 183.96, 301,385 recovered cases, and 82,133 deaths. In Indonesia alone, there were 2,738 confirmed cases, of which 10.26 cases per million people, 204 cases recovered, and 221 deaths. Regarding these data, it is difficult to deny that the spread of this coronavirus has become a global problem, which is not only influential in terms of social, but also economic. The purpose of this study is to propose and test a conceptual model to resolve research gaps on the effect of Covid-19 outbreak to panic buying through social media variables, social distancing policies, supply disruption and knowledge variables as mediating variables.

The results of this study stated that (H1) social media has a significant effect on knowledge and (H2) social distancing has a significant effect on knowledge. This is because social media is continuously updating information and news about the coronavirus, both about its spread, its impact, and steps that can be taken to avoid the transmission of the virus, therefore social media acts as a place to exchange information to form people's perceptions on the ongoing situation (Choi & Lee, 2017; Tang et.al., 2016; Yadav & Rahman, 2017, Yang, 2018). Even though they don't see it directly in the field, thanks to social media, people are able to get a real-time depiction of what is happening (Kass-Hout et al., 2013). The results of this study are in line with the results of research conducted by (Elghannam et.al., 2019; Jing et al., 2019; Lunn et al., 2019), stating that people are willing to spend their time on social media, not just to get information, but also to understand the experiences of other users that are widely shared through these social media. This, in the context of our research, can be said that what people get is not only information, but also someone's experience that can be a reference for their behavior. Social distancing, for example. Someone who sees other people posting their activities while doing social distancing will imitate this behavior because it is considered the right thing to do to avoid infection. Do not stop there, information that contains elements of triggers for fear and concern of the community is also able to move people to carry out social distancing in order to avoid the spread of the virus.

However, the results of this study are not in line with the results of research conducted by (Saadatian-Elahi et al., 2010), in which the results of their research state that there is a high level of public trust in the information and / or knowledge conveyed by doctors / scientists (experts), while the level of public trust in information and / or knowledge coming from politicians, deputies, and the media (including the internet and social media) is very low.

Judging from the facts about social media, where all kinds of information and news are mixed up there, whether positive or negative, original or fabricated, trustworthy or not, it is possible that there will be a more critical community in digesting information from social media which sometimes escapes media filters and monitoring by the authorities. This community group would prefer to consider the opinions of experts to assess the situation rather than believe news and information on social media outright. Not infrequently, they will believe more when they see the facts themselves in the field rather than hear rumors of news that come up steps that make the original source of the news unclear.

This is reflected in the findings of this study, regarding the relationship between supply disruption and knowledge (H_3), where the result is that there is no significant effect between supply disruption and knowledge and (H_4), namely knowledge has no significant effect on panic buying. In other words, information about the ongoing situation due to the impact of the coronavirus alone is not enough to cause supply disruption as information alone is not enough to encourage someone to panic buying. There must be facts in the field or the experience of the community concerned. This is because the prevalence of hoax news and information on social

media that is experienced by the public has triggered public awareness to be more critical in shaping their perceptions of a situation so as not to cause new worries or chaos in the midst of this global emergency situation. In this regard, it is clear why the results of hypothesis (H_5) the relationship between social media and panic buying and (H_6) the relationship between social distancing and panic buying from this study do not have a significant effect.

Hypothesis (H_8) which states that social media affects panic buying behavior through knowledge, (H_9) social distancing policy affects panic buying behavior through knowledge, and (H_{10}) supply disruption affects panic buying behavior through knowledge, is not accepted because it has no significant effect. Panic buying in the context of this research is a behavior that arises due to the influence of the coronavirus. According to (Hutjens, 2014; Jung et al., 2016) it has a strong relationship with perceived risk and fear, as stated by (Peter and Olson, 2004; Trandafilovic et al., 2013; Crilly et al., 2014; Vogelbacker et al., 2014; Huynh et al., 2016), decision making is not only a cognitive process that involves knowledge and information, but is also significantly influenced by emotions, such as anxiety, fear, and other emotional reactions. Panic buying can indeed be triggered by information circulating on social media, it can also be an anticipatory action in response to social distancing calls, where with limited mobility due to social distancing, people will feel safe because they have stored supplies of basic necessities for some time to come or as long as the social distancing is enforced. However, when the authorities and related experts can communicate the risks as accurately as possible and this is accompanied by education to the public on how to respond to this critical situation so that there is no misunderstanding due to confusing information and notifications without clarity and facts in the field, then panic buying can be minimized, even avoided (Lunn et.al., 2020).

However, it will be different if someone comes to a shopping area and finds the shelves that are almost empty or even completely empty and is faced with a shortage of supplies and / or scarcity of products in an emergency (the spread of coronavirus). This person will tend to experience a panic buying, according to the results of research (Sterman and Dogan, 2015), where the results of their research state that people will react to unexpected scarcity and look for ways to secure supplies by hoarding. In line with this, the hypothesis (H7) in this study is that there is a significant influence between supply disruption and panic buying can be accepted. To strengthen these results, the statement from (Shou and Shen, 2013) is in the form of a close relationship between supply disruption and panic buying, namely (1) ongoing supply disruption can lead to panic buying because by panic buying, the consumer believes that he has taken the appropriate action needed to avoid the risk of forecast future supply disruption; and (2) panic buying carried out by consumers on a large scale can cause supply disruption, because the demand for products is very high thus there is an out of stock, which will trigger greater panic buying in the future.

CONCLUSION

Success in dealing with a catastrophic spread of the virus does not only depend on the actions taken by the government, but also the wider community. In this case, good cooperation from all parties is needed in order to get through this global emergency situation with the least impact in all fields.

In relation to the findings of this study, where social media and social distancing have an influence on knowledge, transparency of information from the government and / or other authorities that can be easily accessed by the public is needed in all media, including social media, considering that people often use media. the. Besides being able to help educate the public about the risks and necessary preventive measures (such as social distancing), this can also prevent misinformation and panic in the community. Real examples of successful implementation of transparency of information include Singapore, Hong Kong, Taiwan, Japan and South Korea (Cheung, 2020; Barron, 2020; Yeung, 2020).

In Singapore, the government and / or the authorities send daily briefings regarding coronavirus updates, such as confirming the number of new cases, and so on. Singapore has also

been quick to respond to baseless rumors that could create unrest in its society. Like Singapore, Hong Kong, Taiwan, Japan, and South Korea, they are also known to aggressively provide information and education about health awareness and the importance of social distancing to the public.

Transparency is one of the things that can help reduce panic and hysteria during this uncertain situation. Although in the future the government and / or the authorities will have to disseminate unexpected information (for example, an increase in the number of cases), transparency in this information will help all parties avoid fatal missteps.

Learning from Singapore and other countries about information transparency, making social media a reliable source of information is one of the ways that the government and / or the authorities can implement transparency of information to the public. By utilizing the virality that social media can reach, the government can reach the wider community and disseminate education, appeals, case information, and policies that have been taken to develop public understanding of the situation caused by the spread of this virus. Meanwhile, for areas with minimal use of social media, the government can post appeals posters, take advantage of other media such as television and newspapers. Thus, information about what is happening and what will be faced can be understood by the community.

Another implication that can be taken from this research is the need to educate the public about panic buying and to set a purchase quota for the community to avoid supply disruption if panic buying does occur. Panic buying is no stranger to emergency situations like this. In fact, sometimes panic buying is considered commonplace because when someone is faced with a crisis that promises risk and uncertainty in the future, that person tends to take anticipatory action to reduce risk and get ready for the uncertainty that will occur, which in this context, uncertainty can be how long the situation due to the impact of the spread of this coronavirus will last. However, by providing an understanding to the public about the impact of panic buying, along with attaching the facts that there is no supply disruption, panic buying and the occurrence of supply disruption itself in the future can also be avoided.

However, looking again at the reality on the ground, it cannot be denied that people can still be found hoarding goods, both for personal use and for resale at much higher prices. In Indonesia itself, this has happened, maybe it is still happening. These items are in the form of health masks, hand sanitizers, and others. To overcome this problem, the government can set restrictions on purchasing quotas (Shou et.al., 2013) so that people's purchases can be more targeted and equitable. It is hoped that the determination of the purchase quota will not only reduce the panic buying phenomenon, but also prevent future supply disruptions.

Limitation and future research

This study has limitations, including (1) it does not categorize respondents into those who have recently experienced in the same experience (for example in the spread of MERS, SARS 2002-2003, and others); (2) does not include comparisons of changes in product prices during this emergency situation on products that may be stockpiled by the community, which is considered to affect people's considerations in making purchases; (3) and does not categorize whether purchases made by the community are online or offline, which in this category itself is considered capable of making a difference to the behavior of the consumer concerned (someone will feel more secured when shopping online than offline, given the social distancing appeal).

Regarding this, it is hoped that further research can try to include these three things, as well as trying to assess the relationship between variables that do not have a significant effect in this study. Thus, the results of these further studies can corroborate or contradict the findings of this study.

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