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Panic-Buying Behavior During The Covid-19 Pandemic in Indonesia: A Social Cognitive Theoretical Model

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Abstract: Currently, there are limited studies on the application of the social cognitive theory in social psychology, particularly in explaining and predicting panic-buying behavior during the COVID-19 pandemic in Indonesia. This study is primarily aimed at acknowledging the role of the social cognitive theory's development in explaining and predicting the panic-buying behavior of Indonesian citizens during the COVID-19 pandemic. The development of the theory is attained by combining emotions and subjective norms to predict the panic-buying behavior intention in Indonesia. Using a purposive sampling technique, the sample size consists of 350 respondents from various areas, such as Jakarta, Tangerang, and Banten. An online survey was performed as the data collection method. Social desirabilit response (SDR) test was also conducted by this study to guarantee the naturality of the replies from the respondents. Data were then analyzed using structural equation modeling (SEM) with a two-stage approach. The result demonstrated that emotions have the highest impact on the panic-buying behavioral intention. Further, subjective norms, self-efficacy, and social outcome expectancies have the second, third, and fourth highest impacts on panic-buying behavior, respectively. In general, the social cognitive theory model developed in this study can understand, explain, and predict panic-buying behavior during the COVID-19 pandemic outbreak in Indonesia. Overall, the results of this study may serve as basic information for practitioners and business persons by providing insights regarding the factors that form consumers' intentions and behavior during the pandemic, relating to their buying decisions.

Keywords: COVID-19, emotions, panic buying behavior, social cognition theory, subjective norms.

JEL Classification: C3, M31, M39

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Introduction

The COVID-19 pandemic has been occurring globally since 2019, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in Indonesia was detected on March 2, 2020 when it was confirmed that two Indonesians were diagnosed with the virus from their contact with a Japanese person (Reuters, 2020; Ratcliffe, 2020). By April 9, 2020 the pandemic had spread across 34 provinces, with East Java, the Special Capital Region of Jakarta, and South Sulawesi being the most impacted ones.

Inevitably, the rapid spread caused major repercussions in many aspects of life, including the economy. There has been a worldwide downward trend in stock prices with the Jakarta Stock Exchange Composite Index (JKSE) weakening even before the first case of COVID-19 was positively confirmed (Rahman and Wirayani, 2020). Expecting an economic slowdown in Indonesia as a result of the declining economic activities in China, Bank Indonesia cut the benchmark rate by 25 bps to 4.75% on February 20 (Rahman and Wirayani, 2020).

Another significant effect is the Rupiah's decline on the foreign exchange markets. By March 17, it has dropped to about Rp. 15,000 per dollar, which meant it was comparable to its exchange rate in October 2018 (Safitri, 2020). At the market's close on March 23, the rupiah's exchange rate reached around Rp. 16,000 to the dollar (Safitri, 2020). In the economic sector, it has been reported that the phenomenon of the bulk-buying of basic commodities, out of a sense of panic, has been occurring since the middle of February, and therefore, also before the first case of the pandemic was reported in Indonesia (South China Morning Post, 2020).

With regard to the primary goods trade, according to data provided by the Small and Medium Business Enterprise Office of Jakarta's local government, there has been a significant increase in the prices of products hoarded by the public during the pandemic (see Table 1). The price increase of some products, which are regarded as a necessity during the pandemic, indicate panic-buying behavior around the greater Jakarta area. This behavior arose due to the increased anxiety of the people regarding the possible scarcity of goods during the pandemic.

Table 1. Sample of Product Price List Hoarded by Public During the COVID-19 Pandemic

Item	Initial Price (Rp)	Current Price (Rp)
Face mask	20,000 per box	300,000 per box
Hand sanitizer	40,000 per piece	150,000 per piece
Curcuma	10,000 per kg	40,000 per kg
Ginger	20,000 per kg	40,000 per kg
Lemongrass	6,000 per kg	10,000 per kg
Turmeric	5,000 per kg	12,000 per kg

Source: Small and Medium Business Enterprise Office, DKI Jakarta (June 2020)

The Head of the Crisis Center at Universitas Indonesia/Deputy Secretary-General of Indonesian Association of Disaster Experts (IABI), Dicky Pelupessy, explains that Indonesians' bulk-buying behavior, as an immediate panic response to the corona pandemic (panic-buying) has been triggered by the wildfire-like spread of unreliable and fragmented information (Sulistyawati and Alamsyah, 2020). This widespread misinformation has prompted people to rush out to buy domestic consumption goods in large quantities, for fear that they may need to stock-up to prepare for the possible sudden scarcity of those goods in the markets. Unfortunately, this crisis-related panic-buying behavior can have an unfavorable consequence, as it may lead to an increase in the price of goods and therefore makes them less affordable for those people who have a much higher need of them.

Moreover, the findings of Sulistyawati and Alamsyah (2020), and the data presented in Table 1, are in line with Amalia et al (2020) who stated that in the first quarter of 2020, when the world was faced with the COVID-19 pandemic that forced many countries to reduce their economic activities, there was, in the same period, a significant increase compared to the same period in the previous year in the consumption of healthcare and educational products (7.9%, YoY), and the consumption of household goods (4.5%, YoY). The significant increase in the consumption of healthcare and household goods is very closely related to the pandemic that has increased people's awareness of health issues (Amalia et al., 2020). Hence, the significant increase in the consumption of these items at the beginning of the pandemic indicates the panic-buying behavior of Indonesian citizens.

This phenomenon and its adverse effect correspond to Bonneux and Van Damme's perspective (2006) that epidemics and pandemics would be great challenges to public health in the immediate future due to their power to induce fear and panic as natural human responses to such crises, which has been historically evident thus far. Indeed, panicking is a human response to both natural disasters and non-natural disasters, whose occurrence compromise people's capability to deal with them, and upsets the existing balance of normality. In many cases, people develop forms of behavior that cannot be explained differently between countries or cultures (Bonneux and Van Damme, 2006). Panic-buying, as a type of behavior, is indicated by a rapid increase in the volume of purchases during emergencies involving public health, and has been a phenomenon and a subject of observation for a number of years (Bonneux and Van Damme, 2006).

The perception of scarcity (the perceived scarcity effect) is closely related to panic buying, and the tendency to stockpile goods will increase if the scarcity of essential items becomes worse (Wilkens, 2020; Dholakia, 2020; Bonneux and Van Damme, 2006). The perceived scarcity effect also induces insecurity which, in turn, can activate other mechanisms for hoarding goods (Dholakia, 2020).

Online interviews were conducted with 30 respondents in Jakarta, Tangerang, and Banten during the first period of observation from April 2020 to May 2020. These interviews were conducted using the Zoom meeting application in three different sessions. Each session involved 10 respondents. Researchers were assisted by some colleagues from Frontier Consulting Group. From the interviews, it was observed that most people who experienced panic-buying behavior were affected by a momentary emotional episode resulting from the perceived scarcity of essential goods, influences from others, certain information, and their knowledge of the matter at hand.

Based on the literature study, there has been no study conducted in Indonesia that applies one of the social cognitive theories to understand, explain, and predict panic-buying behavior. Some studies by Julianti (2020), Shadiqi et al (2020), Wahyu et al (2021), and Wijaya (2020), only tried to identify some of the factors underlying the panic-buying behavior in Indonesia. Their findings correspond to the finding by Wijaya (2020), who concluded that there are four major factors behind panic-buying in Indonesia in the wake of the COVID-19 pandemic: information, knowledge, others' influence, and the risk avoidance motive.

One of the theoretical models from the social cognitive framework that may adequately interpret, explain, and predict such panic-buying behavior is the one proposed by Albert Bandura (1989, 1991). According to Bandura, an individual's observed behavior is motivated by three factors, namely goals, outcome expectancies, and self-efficacy. The Social Cognitive Theory (SCT) was initially called the social learning theory (SLT) in the 1960s. SLT was developed into SCT in 1986, since Bandura observed that learning takes place within a social context through dynamic and reciprocal interactions among people, the environment, and behavior. SCT emphasizes social factors and social reinforcement, both external and internal. SCT is relevant to the phenomenon studied in the present research, as it can involve the individual, the environment, and behavioral factors in explaining panic buying in Indonesia during the COVID-19 pandemic.

Nonetheless, there has been a debate about the theory among social-cognitive theorists as it develops (Mccormick and Martinko, 2004). Some theorists argue that it has several limitations in understanding, explaining, and predicting consumer behavior (Mccormick and Martinko, 2004; Luszczynska and Schwarzer, 2005; Ratten and Ratten, 2007; Carillo, 2010), which are, among others: (1) It assumes that a change in the environment habitually results in a change in the individual's behavior, which is not necessarily so. (2) It focuses only on the dynamic interaction between the individual, the behavior, and the environment without identifying to what extent each of these factors actually plays a role and what may be the result if one factor has more influence than the other ones. (3) It does not particularly address the emotional or motivational factors, apart from considering them in their relation to past experiences, while they need more attention.

In light of the above-mentioned limitations of the social cognitive theory, its use in the present research as a theoretical model to explain and predict the pandemic-related panic-buying in Indonesia will include the combination of two variables, called subjective norms and emotions. The inclusion of these variables is based on the initial interviews, which revealed their involvement. It is also based on the view that Mccormick and Martinko (2004), Luszczynska and Schwarzer (2005), Ratten and Ratten, (2007), and Carillo (2010) all agree on, namely that to better explain and predict consumer behavior, the social cognitive theory needs to consider including an individual's emotions as one of the important factors.

Moreover, the inclusion of subjective norms and emotions is in line with Gross (1998), who stated that emotions are a response, within an individual, that can be regulated by the individual to achieve certain goals. For example, an individual is trying to suppress his/her anger or fear, to handle a certain situation better (i.e. instrumental goals), or an individual is trying to increase his/her joy in certain situations to achieve his/her goals (i.e. hedonistic goals). Hence, the intention for panic-buying behavior is based on the perceived emotions of Indonesian people, which follows Gross (1998, 2014) who found evidence that emotions are the underlying reason for an individual's intention to behave.

Gross (1998) also stated that an individual can control and regulate his/her emotions that are connected to his/her behavior. Thus, Gross (2002) and Koole (2009) found evidence that an individual's ability to control and regulate his/her emotions is strongly related to his/her ability to deal with a difficult situation. This ability is known as self-efficacy (Bandura, 1989,1991). In other words, self-efficacy has an important role in defining the types of emotions expressed by an individual in their behavior (Gross, 2002; Koole, 2009). Studies by Lazarus and Folkman (1984), Gist and Mitchell (1992), and Heuven et al (2006) show the role of self-efficacy in affecting an individual's emotion in his/her observed behavior.

The studies contributed by Namkung and Jang (2010) and Budiyanti and Patiro (2018) have resulted in the finding that an individual's emotion, which is preceded by external stimuli, will affect his/her intent and behavior. Tangney and Fischer (1995) recognized emotions as a state of stimuli from living organisms which includes realized changes that are deep in nature, and changes in behavior. Further, they stated that Descartes categorized emotions, which include, desire, hate, sorrow, wonder, love, and joy. While J.B. Watson identifies three types of emotions, which are: fear, rage, and love.

Other studies by Fishbein and Ajzen (1975, 2010) and Ajzen and Fishbein (1980), have revealed that one of the major determinants of behavioral intention are the subjective norms. The subjective norms refer to an individual's belief that an important person or group of people will approve of a particular behavior that he/she intends to do (e.g., "will my wife/family/friend want me to do this?"), and they are considered to be a standard to conform to (e.g. "do I want to do what my wife/family/friend wants me to do?"). It follows that an individual will only have a limited number of reference group in his/her mind when he/she is considering performing a particular behavior (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Fishbein and Ajzen, 2010).

Literature Review

Panic buying

Panic-buying occurs when consumers purchase products in large amounts, so they have some if the products are not available in the future (Dholakia, 2020; Gupta and Gentry, 2019). This behavior arises in a pandemic situation due to the significant reduction in the number of available resources, which induces fear and anxiety among people regarding the possibility of shortages in the near future. Panic buying is the purchase of excessive amounts of goods due to uncertainty (Dholakia, 2020; Gupta and Gentry, 2019). Moreover, Singh and Rakshit (2020) stated that panic-buying behavior emerges when consumers buy goods in bulks to anticipate shortages, this increases prices during a disaster. Panic-buying behavior will tend to increase as a result of mass information on public platforms regarding shortages in the near future (Roy et al., 2020).

Tsao et al (2019) concluded that panic-buying behavior is a public issue in today's fast-moving environment due to bad weather, national strikes, natural disasters, and changes in government policies. Moreover, these events create selection problems for consumers. As stated by Gupta and Gentry (2019), individual risk is described as a potential threat to a person's health and wealth. An individual makes choices based on the benefits and perceived risks that would arise. Thus, consumers' attitudes define those two attributes.

A consumer with a positive attitude tends to have a higher perceived benefit, while a consumer with a negative attitude tends to have a higher perceived risk (Wang, Liu, and Zhang, 2019). Moreover, Wang, Liu, and Zhang (2019) asserted that when consumers perceive a specific risk, they tend to examine it. A consumer who perceived a risk from a disaster will speculate and behave in a way that would reduce the perceived risk, by buying in bulk. For example, a quarantine policy in an area would increase the risk of food shortages, and if there is no adequate healthcare equipment, a plague could emerge (Wang, Liu, and Zhang, 2019).

In the psychology of survival, it has been widely agreed that an individual can demonstrate certain behavioral change(s) when faced with major emergencies, such as natural disasters and pandemics, which potentially disturb the individual's social life or even threaten his/her health (Leach, 1994). One example of such a behavioral change is panic buying, as indicated by a consumer who buys particular products in large quantities, in anticipation of the need to stockpile essential goods during or after the disaster, as either the price of the goods will increase or they will quickly become scarce (Steven, O'Brien, and Jones, 2014).

Panic buying is socially undesirable behavior since it involves a group of people purchasing essential goods and medical supplies in great quantities, which often causes the out-of-stock situation for those products in the markets (Steven, O'Brien, and Jones, 2014). This is the type of situation that may prevent unfortunate individuals, such as senior citizens and low-income people, from getting access to those products (Wesseler, 2020). In short, it can create a negative externality in society. Moreover, in a retail context, panic buying may lead to further disturbances in the supply chain (Zheng, Shou, and Yang, 2020). The ensuing sporadic surge in the demand for consumer products, together with roadblocks or traffic reductions, has posed challenges for ordering, restocking, and distribution systems. Such an effect often exacerbates the out-of-stock situations and increases the prices of consumer products. Panic-buying behavior is one of the gaps in consumer behavior studies that have not been adequately addressed, particularly concerning the issue of socially and emotionally driven purchase decisions with negative consequences, e.g. fear of the unknown and anxiety (Li et al., 2020; Wang et al., 2020).

The panic-buying behavior phenomenon may be understood and explained through the social cognitive theory (SCT) by Bandura (1989, 1991). The SCT model is one of the social cognitive theories that has been recognized for its ability to understand, explain, and predict a phenomenon in various behavior domains, including panic-buying behavior. The SCT is also capable of identifying some psychosocial factors from the mind, feelings, and human behavior in a reciprocal relationship, which is triadic and dynamic between the individual, his/her behavior, and the environment. In this triadic relationship, behavior factors, cognitive factors, and environmental factors are continuously interacting. As a result of this interaction, human behavior will be formed (Young, Lipowski, and Cline, 2005). Therefore, the panic-buying behavior is a result of the triadic relationship between behavior factors, cognitive factors, and environmental factors.

Moreover, the SCT model has a central variable regarded as the main predictor of intention and behavior. This central variable is self-efficacy. Through self-efficacy, an individual is capable of conducting certain types of behavior based on the expected physical and social impacts when that behavior is displayed. When someone conducts panic-buying behavior, it is always based on his/her belief that he/she is capable, and expects a physical and social impact from that behavior.

Social Cognitive Theory (SCT) Model

As informed by Armitage and Conner (2000), the SCT has been frequently used to understand, explain, and predict behavioral intention and observed human behavior in various contexts. According to the SCT (Bandura, 1989, 1991), the behavior that an individual shows is motivated by three factors: goals, outcome expectancies, and self-efficacy (see Figure 1).

A goal is a plan to act and is construed as an intention to perform a certain behavior (Luszczynska, Dona, and Schwarzer, 2005). Outcome expectancies are indicated in physical, social, and self-evaluation forms, based on the nature of the expected outcome. Situation-related outcome expectancies are based on the perception that some consequences are caused by the environment and therefore cannot be controlled by the individual (Armitage and Conner, 2000). Action-related outcome expectancies are based on the belief that an individual's action is an instrument for achieving a particular outcome (Armitage and Conner, 2000).

Self-efficacy is an individual's belief in his/her control of his/her behavior, and it is usually considered as the individual's level of confidence in his/her capabilities of engaging in certain behavior, despite any challenging circumstances (Bandura, 1989, 1991; Luszczynska, Dona, and Schwarzer, 2005). In short, self-efficacy is related to a person's confidence in his/her ability to perform a

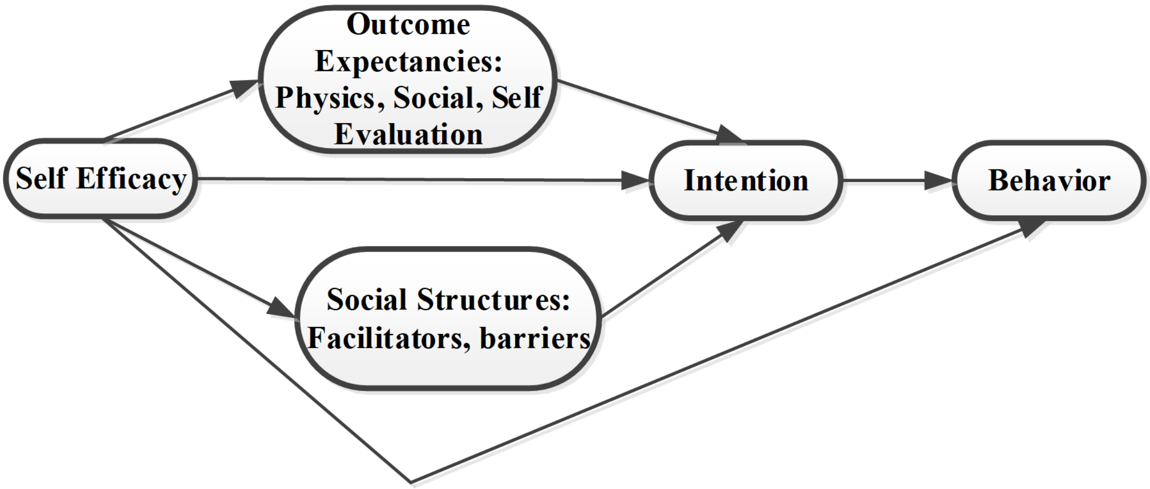
Outcome Expectancies: Physics, Social, Self Evaluation
Self Efficacy
Intention
Behavior
Social Structures: Facilitators, barriers

Figure 1. Social Cognitive Theory
Source: Bandura (1991, 2001, 2002)

particular behavior (Bandura, 1991, 2001). This is a variable that can also be found in the protection motivation theory (PMT) model as stated by Rogers in 1975 (Cismaru et al., 2011).

Moreover, Cismaru et al (2011) stated that the protection motivation theory (PMT), as initiated by Rogers (1975), is a theory that was initially developed to assist an individual in overcoming their anxiety/fear in an uncertain situation or condition. According to Cismaru et al (2011), the PMT stated that an individual would protect his/herself based on four factors, namely: the perceived severity of a threatening event, the perceived probability of the occurrence, or vulnerability, the efficacy of the recommended preventive behavior, and perceived self-efficacy.

According to the PMT, self-efficacy is the belief in an individual's ability to successfully conduct a recommended behavior (Cismaru et al., 2011). In line with SCT theory, which is used as the main theory in this study, self-efficacy also plays an important role in explaining and predicting panic-buying behavior due to the existence of others recommendation such as from a reference group. , as well as from a reference group.

Bandura (2001) further added social structural factors into his theoretical model. These factors either facilitate or inhibit certain forms of behavior, and may contribute to a change in the behavior through certain changes in the goals. Social structure factors refer to limitations or opportunities that result from particular living conditions, health systems, politics, the economy, and environmental systems. These factors can function as information to take into consideration when setting goals, and they can also be influenced by self-efficacy.

According to Albert Bandura, self-efficacy is one's belief in his/her capabilities to successfully influence the environment by fulfilling certain tasks or solving some matters (Cismaru et al., 2011). Self-efficacy is regarded as one of the most important elements in the motivation theory. A person will be more motivated to perform a particular behavior when he/she believes in his/her ability to successfully perform that behavior, and it will provide the expected social impact (Park, Son, and Kim, 2012). For example, in an organization, according to Albert Bandura, an individual will tend to display and continue the desired behavior if he/she believes that he/she can influence many factors, including the motivation to learn, career development selections, and the organizational climate (Nikou and Economides, 2017).

The relationship between self-efficacy and social structure occurs through the role of self-efficacy in affecting an individual's ability to recognize opportunities or limitations while he/she is living his/her life. It also includes the perception of the environment as an influential factor in health-related behavior. Previous studies by Park, Son, and Kim (2012); Kim, Lee, and Rha (2017); Kabra et al (2017), Nikou and Economides (2017), and Hamidi and Jahanshaheefard (2019) have all shown the existence of the influence of expected social impacts on the intention to behave. According to these studies, when an individual believes that the displayed behavior will provide the expected social impact, he/she will form the motivation to perform the particular behavior.

As alluded to earlier, the SCT has been useful in understanding, explaining, and predicting various forms of behavior related to health, but, unlike other related models, the SCT model only takes account of one or two components as the main factors affecting the behavioral intention—usually self-efficacy and outcome expectancies—and therefore underplays the influence of other components (Armitage and Conner, 2000).

Bandura (2001) and Luszczynska, Dona, and Schwarzer (2005) relate that in various studies, self-efficacy, outcome expectancies, and the behavioral intention are the primary predictors of health-related human behavior. Accordingly, the SCT presumes that an individual will engage in a particular behavior if he/she can control its outcome, there are a number of external obstacles, and he/she has confidence in his/her own ability to do so.

H1: Self-efficacy has a positive influence on the expected social impact when panic-buying behavior occurs during the COVID-19 pandemic in Indonesia

H2: The expected social impact has a positive influence on the behavioral intention related to panic-buying during the COVID-19 pandemic in Indonesia

H3: Self-efficacy has a positive influence on the behavioral intention related to panic-buying during the COVID-19 pandemic in Indonesia

Self-Efficacy's Influence on Emotions

This research focuses on the role of self-efficacy in enabling the positive emotions which usually accompany panic-buying behavior. In the social cognitive theory posited by Albert Bandura (1996), self-efficacy is defined as one's confidence in his/her capabilities to manage and perform the actions that are considered necessary to achieve a particular goal. It can function as a form of stress relief and a motivational boost when dealing with difficult and emotionally challenging tasks (Bandura, 1996). Gist and Mitchell (1992) observed that individuals with higher self-efficacy are more capable of creating positive emotions than those with lower self-efficacy, when faced with new and demanding tasks. Individuals with good self-efficacy have more confidence in their ability to carry out emotionally demanding tasks effectively, set more challenging goals, invest more, survive longer, and cope with failures better, compared to individuals with lower self-efficacy (Bandura, 1996).

Previous studies concluded the influence of self-efficacy on positive and negative emotions. For example, Heuven and Bakker (2003), Heuven et al (2006), Caprara et al (2008), and Gunzenhauser et al (2013) all asserted that people with positive self-efficacy can manage and express their emotions positively and negatively, due to their strong faith in their ability to perform tasks successfully in various situations, including controlling their emotions. Furthermore, with adequate self-efficacy, they may set a more challenging goal, invest confidently, endure longer, and feel superior to other people when experiencing a failure, compared to people with low self-efficacy (Caprara et al., 2008; Gunzenhauser et al., 2013).

H4: Self-efficacy has a positive influence on one's emotions during panic-buying behavior during the COVID-19 pandemic in Indonesia.

Emotion's Influence on Behavioral Intention

Emotions are construed in many contexts as moods, feelings and affects, goal-directed emotions (Bagozzi, 1997), and appraisal emotions (Nyer, 1997). Goal-directed emotions are the emotional outcoms shaped by consumers (Bagozzi, 1997; Bagozzi, Gopinath, and Nyer, 1999) in particular situations and are regarded as intentional, like a comedy that is purposely made to stimulate laughter and joy. Appraisal emotions refer to the result of performance appraisals, attitudes, and evaluative judgments (Arora and Singer, 2006; Bagozzi, Gopinath, and Nyer, 1999). They are closely related to satisfaction and value (Arora and Singer, 2006; Bagozzi, 1997; White and Yu, 2005). Emotions communicate and stimulate behavior, and this also has implications for any action contemplated or taken (Arora and Singer, 2006; Bagozzi, Gopinath, and Nyer, 1999; Taylor, 2000).

H5: Emotions have a positive influence on the behavioral intention related to panic buying during the COVID-19 pandemic in Indonesia.

Subjective Norms' Influence on Behavioral Intention

The theory of planned behavior (TPB) developed by Schifter and Ajzen (1985), Ajzen and Madden (1986), and Ajzen (1991), is considered to be the most influential theory for understanding, explaining, and predicting social behavior. The TPB's model is an extension of the theory of reasoned action (TRA), which Ajzen and Fishbein (1980) asserted unifies social influence and individual factors as the predictor of behavioral intention. Social influence is conceptualized as perceived pressure to display or not to display certain behavior, from other people who are considered to be significant others. This is known as the subjective norm.

The subjective norm refers to an individual's perception of the opinion of the person or people he/she considers important; based on this he/she sees whether the person or people will approve of the behavior he/she intends to engage in (Ajzen and Fishbein, 1980; Ajzen and Madden, 1986; Fishbein and Ajzen, 1975, 2010). The subjective norm represents the perceived social pressure to behave as expected by others. In other words, the subjective norm reflects the expectations of a reference group (the important others) that an individual will behave in a certain manner (Ajzen, 1991; Schifter and Ajzen, 1985).

Previous studies conducted by Patiro and Sihombing (2014), Patiro and Budiyanti (2016), Patiro et al (2016), and Budiyanti and Patiro (2018) have displayed the influence of subjective norms on behavioral intentions. An individual with a positive subjective norm regarding the displayed behavior will form a behavioral intention that he/she will continue to display the same behavior in the future.

H6: Subjective norms have a positive influence on the behavioral intention related to panic buying during the COVID-19 pandemic in Indonesia.

Behavioral Intention's Influence on Actual Behavior

Behavioral intention is understood to be an individual's conscious plan or motivation to show a certain type of behavior (Fishbein and Ajzen, 1975; Ajzen, 1988; Ajzen, 2005). In this context, the intention is regarded as the best predictor of behavior since it affects an individual's conscious decision to perform or not to perform the specified behavior.

Studies by Fishbein and Ajzen (2010), Hendrian and Patiro (2019), and Ajzen (2012) have shown that the intention to behave is the main indicator for individual behavior.

The intention to behave is a strong driver of an individual's motivation to perform a particular behavior to fulfill his/her needs (Armitage, 2005; Trafimow, 2009; Sniehotta, Presseau, &Araújo-Soares 2014).

H7: Behavioral intention has a positive influence on panic-buying behavior during the COVID-19 pandemic in Indonesia

Based on the theoretical perspectives and the formulated hypotheses presented above, the researcher proposes the following theoretical model to approach the phenomenon under study.

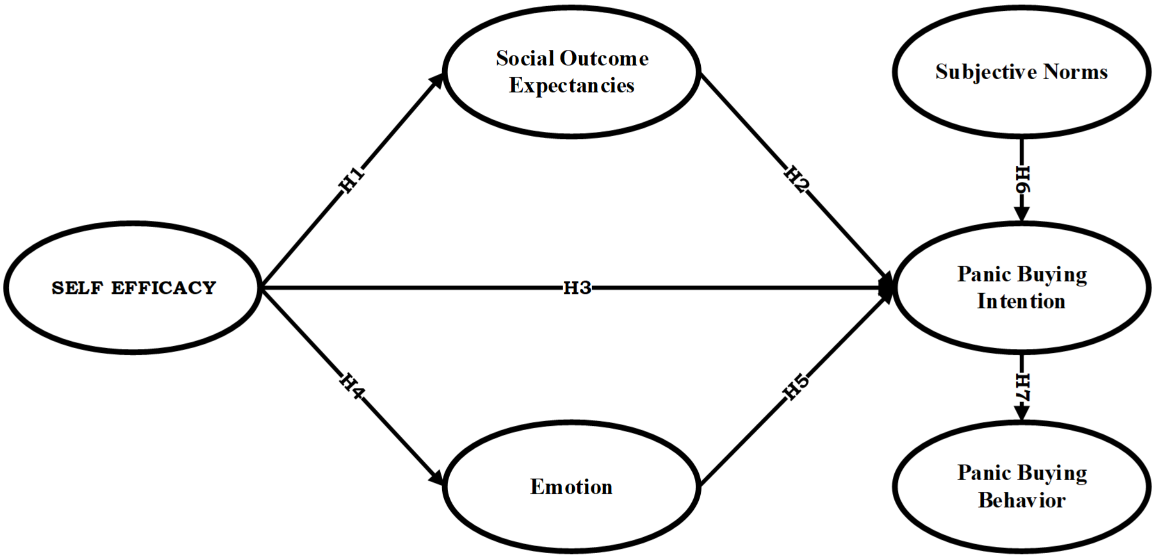

Figure 2. Theoretical Model

Methods

This research was conducted in two stages: stage 1, which was qualitative, and stage 2, which was quantitative. In stage 1, the researcher carried out exploratory research from April 2020 to May 2020. The specified study aimed to explore the respondents' self-efficacy, outcome expectancies, and goals for engaging in panic-buying behavior during the pandemic. In this stage, the researcher was assisted, by a colleague from the Frontier Consulting Group, to carry out online interviews with 30 respondents. Exploratory research, according to Iacobucci, Gilbert, and Churchill (2018), should focus on collecting ideas and inputs. The 30 respondents were chosen to be interviewed based on these considerations: (1) They had experience of doing panic-buying because of certain events or circumstances. (2) They were willing to participate in this research.

From the interviews, the researcher specified some items which had been chosen by at least 10% of the respondents (Fishbein and Middlestadt, 1995). The items chosen by these respondents formed the basis for building a preliminary questionnaire, in the form of statements on a scale of 1 = strongly disagree to 5 = strongly agree. Afterward, the researchers created a questionnaire as the basis to carry out a factor analysis (the full questionnaire is available in the appendix section). The questionnaire was then distributed as an online survey, with the help of the researcher's colleague from the Frontier Consulting Group, to which 106 people responded. The following factor analysis led to the finding that four important factors affect Indonesians' behavioral intentions in relation to panic-buying during the COVID-19 pandemic, namely self-efficacy, outcome expectancies, positive emotions, and subjective norms (see Table 2).

These factors were later used as a basis to build another questionnaire for the quantitative stage of this research. Stage 2 (the quantitative stage) was conducted from June to July 2020. The measurement of the behavioral intention was carried out in June 2020, whereas the measurement of the actual panic-buying behavior was carried out in July 2020.

Measurement

The quantitative questionnaire was built by combining the findings resulting from the exploratory research with the relevant indicators developed in previous studies by Bandura (1991; 2001; 2002), Fishbein and Ajzen (2010), Namkung and Jang (2010), and Budiyanti and Patiro (2018).

Responses to the questionnaire were measured on a 5-point Likert scale as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree. The four constructs addressed in this research—self-efficacy, outcome expectancies, emotion, and subjective norms—were each measured in the questionnaire using four indicators. Some examples of the indicator questions (statements) used in the questionnaire are: "I'm sure I have sufficient resources to buy and stockpile the goods I need during the COVID-19 pandemic"; "I'm sure that society approves of my decision to buy and stockpile the goods that I need during the COVID-19 pandemic"; "I'm happy to be able to buy and stockpile the goods that I need during the COVID-19 pandemic"; "I'm sure that my friends approve of my decision to buy and stockpile the goods that I need during the COVID-19 pandemic"; "I intend to buy and stockpile the goods that I need during the COVID-19 pandemic." Unlike the above mentioned constructs, panic-buying

Table 2. Analysis of Factors' Results

Constructs	Indicators	Loading factor
Self-Efficacy	SE1	0.777
	SE2	0.861
	SE3	0.891
	SE4	0.798
Social Outcome Expectancies	OSE1	0.823
	OSE2	0.831
	OSE3	0.844
	OSE4	0.779
Emotion	E1	0.719
	E2	0.748
	E3	0.846
	E4	0.875
Subjective Norms	NS1	0.828
	NS2	0.824
	NS3	0.799
	NS4	0.887

behavior was measured using only two indicators. The first indicator was measured on a semantic differential scale. The second indicator was measured on a ratio scale. The indicator questions were as follows: "Have you bought and stockpiled essential goods during the COVID-19 pandemic?"; and "How many times have you bought and stockpiled essential goods during the COVID-19 pandemic?" Panic-buying behavior was measured within one month of the measurement of behavioral intent.

The results of this preliminary study were used as the basis for compiling a questionnaire to be used at the quantitative stage. The quantitative stage was carried out in June 2020, specifically until the measurement of intention. In July 2020, we measured the actual panic-buying behavior of Indonesians.

Results and Discussions

Validity and Reliability Test

After the questionnaire was formed, the authors conducted a Social Desirability Bias (SDR) test which was conducted using a non-paired sample. The sample size used in the SDR test was 30 people, consisting of 15 people for each group. When conducting the SDR test, we worked from home in Palu City due to the situation and conditions caused by the COVID-19 pandemic. The SDR test was conducted in two sub-districts of Palu City which still had green zone status, namely: South Palu District (15 respondents) and East Palu District (15 respondents). The first group, (the 15 respondents in South Palu District), were given direct questions, while the second group, (the 15 respondents in

Table 3. SDR Test

Constructs	**Indicators**	**Loading factor**
Self-Efficacy	SE1	0.177
	SE2	0.261
	SE3	0.191
	SE4	0.198
Social Outcome Expectancies	OSE1	0.123
	OSE2	0.231
	OSE3	0.344
	OSE4	0.179
Emotion	E1	0.119
	E2	0.148
	E3	0.246
	E4	0.375
Subjective Norms	NS1	0.128
	NS2	0.124
	NS3	0.299
	NS4	0.187
Panic-buying Intention	I1	0.098
	I2	0.108
	I3	0.127
	I4	0.097

East Palu District), were given indirect questions. The SDR test for non-paired samples in this study used the Mann-Whitney test with the help of SPSS software. The result showed that the p-value obtained was more than 0.05, which meant that the two samples (non-paired) came from a population that had the same average (mean) or expectations, in other words, the average respondents' answers from the two samples were similar. More details can be seen in Table 3.

To test the construct's validity in this study, we distributed questionnaires online with the help of colleagues from the Frontier Consulting Group. A total of 87 respondents were obtained in this test. Furthermore, the results of the questionnaire were analyzed using factor analysis (FA) with the help of SPSS. The results showed that all the measurement indicators had shown a representation for each construct and produced a factor loading value > 0.5, this indicated that the measurement constructs had good discriminant validity. Hair et al (2010) provide direction in determining the factor loading value that is considered significant. Chin (1998) states that for the confirmatory stage research into the measurement scale, a factor loading value > 0.6 is considered sufficient. Hence this is the loading factor that was considered significant in this study. For more details, see Table 4.

Table 4 (calculation results of convergent validity) shows that the convergent validity for each construct is properly adequate, as the AVE value exceeds 0.7 (Fornell and Larcker,1981; Nunnally and Bernstein,1994; Hair et al., 2010; Chin, 1998). Table 4 also shows that the Cronbach's alpha value and

Table 4. Discriminant Validity, Convergent Validity, and Reliability Test

Constructs (Cronbach Alpha)	Indicators	Loading Factor	Composite reliability	AVE (Average Variance Extracted)
Self-Efficacy (0.871)	SE1	0.777	0.890	0.617
	SE2	0.861		
	SE3	0.891		
	SE4	0.898		
Social Outcome Expectancies (0.858)	OSE1	0.723	0.902	0.675
	OSE2	0.831		
	OSE3	0.844		
	OSE4	0.879		
Emotion (0.786)	E1	0.919	0.869	0.577
	E2	0.848		
	E3	0.846		
	E4	0.775		
Subjective Norms (0.773)	NS1	0.828	0.888	0.613
	NS2	0.824		
	NS3	0.899		
	NS4	0.887		
Panic-buying Intention (0.881)	I1	0.898	0.878	0.727
	I2	0.708		
	I3	0.727		
	I4	0.797		

composite reliability for each construct exceed 0.7, thus the measure used in this study was reliable (Nunnally and Bernstein, 1994). Further, we used composite reliability as the reliability testing method, because it is considered to be superior in estimating the internal consistency of a construct (Fornell and Larcker, 1981; Nunnally and Bernstein, 1994; Salisbury et al., 2002).

Respondent Characteristics

The respondents in this study were 350 persons who were obtained online. Of these 350 respondents, 30% are male and 70% female, 65% of them are married and 35% single, while 10% are below 30 years old, 50% are 31 to 45 years old, and 40% are above 45 years old. Regarding their employment, 25% work as civil servants, 30% work as employees in private companies, 30% work as employees at state-owned enterprises, and 15% work elsewhere. Education wise, 10% are high school graduates, 60% are undergraduates, and 30% postgraduates. Regarding their monthly expenses, 33% of them spend between IDR 2,500,001 and IDR 5,000,000, while 67% spend more than IDR 5,000,000 per month.

Structural Model's Testing

For this test, we used structural equation modeling (SEM) through a two-stage approach with the help of IBM SPSS Amos 21 software. The results can be seen in Figure 3 and Table 6.

Table 5. Correlation Between Latent Constructs

	Constructs	1	2	3	4	5
1	*Self-Efficacy*	1				
2	Social Outcome Expectancies	0.223*	1			
3	Emotion	0.250**	0.192*	1		
4	Subjective Norms	0.141*	0.175*	0.312**	1	
5	Panic-buying Intention	0.224**	0.239**	0.347**	0.267**	1

**. Significant at 0.01 (2-tailed); *. Significant at 0.05 (2-tailed)

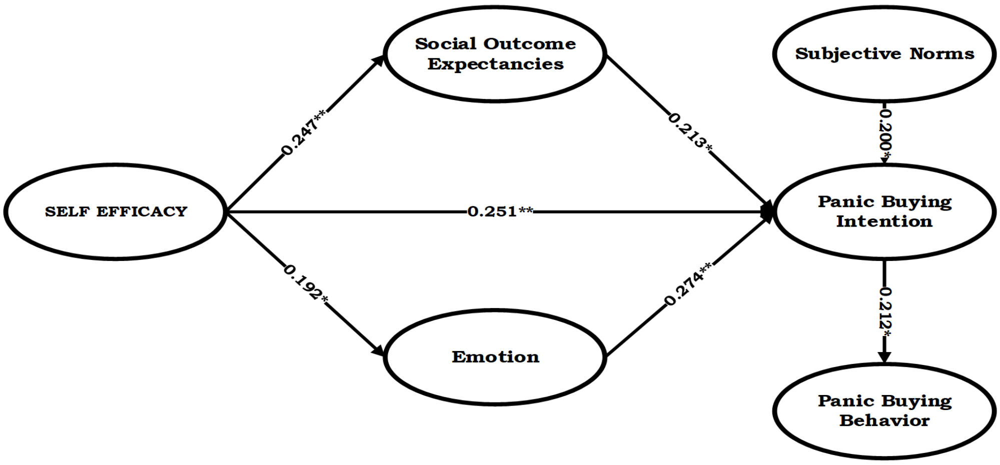

Figure 3. Structural Model Test

**. Significant at 0.001 (2-tailed); *. Significant at 0.05 (2-tailed); χ2= 112.719 ; CMIN/DF=2.127 ; GFI=0.942; AGFI=0.910; RMR=0.062; RMSEA=0.052; NFI=0.912; CFI=0.928.

Table 5 shows the result of the correlation between the latent constructs used in this study. Based on this table, the correlation value between the latent constructs is closed and significant.

Based on estimating the structural parameters using SEM, we can conclude:

Hypothesis 1 is supported, which is in line with the research conducted by Middleton, Hall, and Raeside (2019) and Alexander, Cao, and Alfonso (2002); who all stated that self-efficacy has a positive and significant effect on the expected consequences resulting from a certain behavior. As argued by Bandura (1991), self-efficacy is a specific domain and can be different according to the situation and conditions. Furthermore, Bandura (1991) states that in some circumstances people may feel more confident about their behavior and ability to successfully perform tasks, compared to others. As the results of this study show, the Indonesian people who panic buy are confident and believe in their abilities and the availability of their resources, so their actions will have an impact on the expected results as a result of the panic-buying behavior that they displayed when the COVID-19 outbreak first occurred.

Hypothesis 2 is supported, in line with Bandura (1991), who identifies that the expected results in the SCT consist of three different forms, namely physical, social, and positive and negative self-evaluation results. In each of its forms, positive expectations serve as incentives, while negative ones serve as disincentives. In this study, the outcome expectancies are social impacts, which will be experienced if panic buying is undertaken. The social outcome expectancies in this study are acceptable outcomes and depend greatly on their assessment of how well they undertake panic buying in the current COVID-19 situation. The outcome expectancies in the SCT framework are antecedents of the intention to perform a certain behavior (Bandura, 1991). The results of this study are also consistent with Agarwal et al (2013), and Rana and Dwivedi (2015), who identified that an important aspect of the environment that affects behavior is the information received through mass communications. This is in line with Bandura (2001) who stated that the SCT is based on the idea

Table 6. Structural Parameters' Estimation

Path Hypotheses	Path Coefficient	t-value	p-value	Conclusion
H1 (Self-efficacy has a positive effect toward social outcome expectancies)	0.247	3.313**	0.00102	Supported
H2 (social outcome expectancies has a positive effect on the panic-buying behavioral intention)	0.213	2.200*	0.028464	Supported
H3 (self-efficacy has a positive effect on the panic-buying behavioral intention)	0.251	3.329**	0.000965	Supported
H4 (self-efficacy has a positive effect on emotion)	0.192	2.333*	0.020217	Supported
H5 (emotion has a positive effect toward the panic-buying behavioral intention)	0.274	3.786**	0.00018	Supported
H6 (subjective norms have a positive effect toward the panic-buying behavioral intention)	0.200	1.987*	0.047706	Supported
H7 (the intention to behave has a positive effect on panic-buying behavior)	0.212	2.182*	0.029778	Supported

that most external stimuli affect behavior through the cognitive processes that determine which external events are considered important, as the basis for displaying behavior.

Hypothesis 3 is supported, and is consistent with Bandura (1989) who stated that many forms of human behavior are regulated by thoughts which correspond to known goals, and the setting of personal goals is influenced by the self-assessment of one's abilities. The results of this study are consistent with research conducted by Zhang et al (2012) and Middleton, Hall, and Raeside (2019), who stated that the stronger one’s perceived self-efficacy is, the higher the goals the person set for him/herself would be, and the stronger the commitment would be to achieving them. As the results of this study show, Indonesians who panic buy are driven by the confidence in their abilities and the availability of their resources when facing the COVID-19 outbreak. A person's self-efficacy beliefs determine their level of motivation, as reflected in their efforts and how far they will survive when facing obstacles (Bandura, 1989). The stronger their confidence is about their abilities, the bigger and more persistent their efforts will be when panic buying due to the COVID-19 outbreak that has hit Indonesia.

The fourth hypothesis is also well supported, in line with Bandura (1996) who found that self-efficacy is a person's belief in his or her ability to organize and carry out the necessary actions. This ability is related to reduced stress and increased motivation when facing difficult tasks (Bandura, 1996). The results of this study are consistent with research conducted by Singh and Bussey (2011) who discovered that a person with good self-efficacy has a stronger belief in his or her ability to successfully perform tasks in emotionally laden situations, will set more challenging goals for him/herself, survive longer, and is better at dealing with failed experiences than people who have low self-efficacy. Among individuals affected by non-natural disasters, such as the COVID-19 pandemic that hit Indonesia, self-efficacy acts as an antecedent for shaping the Indonesian people's emotions related to panic-buying behavior. This phenomenon is consistent with the statement of Benight and Harper (2002), who say that self-efficacy shows the ability to deal with acute stress, as a result of positive emotions due to global pressure. Given the role of self-efficacy in achieving good performance, and the fact that performance achievement is a positive emotion, it is logical to say that there is a significant relationship between self-efficacy and the formation of emotions (Benight and Harper, 2002).

Furthermore, the fifth hypothesis is supported, in line with research by Namkung and Jang (2010), Ltifi and Gharbi (2012), and Budiyanti and Patiro (2018) who all concluded that positive emotions have a positive effect on the formation of behavioral intentions. The underlying concept regarding the relationship between emotions and behavioral intentions is that people often make judgments about external events based on the affective reactions that occur at one time (Williamson and Williams (2011). In this study, Indonesians perceived the existence of an external stimulus, namely the COVID-19 pandemic, they formed their emotions which encouraged them to form their intention to panic buy, to overcome fears of a scarcity of necessities during the pandemic. Emotions that are formed and directed at a goal are the emotional outcomes that are formed by individuals in certain situations and seen as deliberate (Bagozzi, 1997; Bagozzi, Gopinath, and Nyer, 1999). The assessment of emotions is the result of performance appraisals, attitudes, and evaluative judgments, and is closely related to satisfaction and value (Bagozzi, Gopinath, and Nyer, 1999; Arora and Singer, 2006). Emotions can stimulate behavior and have implications for the formation of actions (Bagozzi, Gopinath, and Nyer, 1999; Arora and Singer, 2006).

The sixth hypothesis is supported, which confirms the studies conducted by Fishbein and Ajzen (2010), Stead et al (2011), and Stok et al (2012), in that social norms, in this case, are subjective norms defined as the rules regarding acceptable behavior, values , and beliefs that are owned by a group or society. This is because people act in a social environment rather than as isolated individuals, so that the social norms that exist in this environment have an important influence on their behavior (Cialdini, Reno, and Kallgren, 1990; Cialdini, Kallgren, and Reno, 1991; Schultz et al., 2007). In this study, the Indonesian citizens who panic buy do this because of the approval and/or advice they receive from their reference groups. Further, besides the approval and/or advice they received, they also saw that others also behaved in this way (panic buying), because they worried about the scarcity of goods during the COVID-19 pandemic in Indonesia.

Finally, Hypothesis 7 is also well supported, which provides more evidence for the concept argued by Ajzen (1991), Ajzen (2005), Fishbein, and Ajzen (2010), who all claim that actual behavior is a consequence of planned behavioral intentions. The behavioral intention is a subjective individual assessment of the possibility of him or herself doing, or not doing, a certain behavior (Fishbein and Ajzen, 2010). The results of this study are in line with research conducted by Patiro and Sihombing (2014), Patiro and Budiyanti (2016), Patiro et al (2016) who found that the behavioral intention is assumed to include motivational factors that have an impact on behavior. Indications about this are: (a) How hard the individual tries to try. (b) How much effort is made to display certain types of behavior (Ajzen, 1988; 2005). The intention to behave at the right time and opportunity will trigger behavioral characteristics, until the change from intention to behavior occurs (Ajzen, 1988; 2005).

Conclusion

The results of this study indicate that generally, a model of the SCT's development can understand, explain, and predict the panic intentions and behavior of Indonesian people buying necessities in bulk during the COVID-19 pandemic. Furthermore, the results of this study also confirm the role of behavioral intentions in explaining and predicting the actual behavior. The antecedent variables in this study, such as self-efficacy, outcome expectancies, emotions, and subjective norms increasingly emphasize their role as predictors of behavioral intentions. The results of this study also confirm that the SCT model is adaptive and dynamic, and has been used in various disciplines because it tries to explain the reasons underlying a particular individual behavior. These characteristics make the SCT very attractive, validated, accepted, and applied successfully to various domains of behavior.

A systematic review of this study shows that the SCT model has a predictive ability in explaining the panic-buying behavior during the COVID-19 pandemic in Indonesia. After reviews of the qualities and adequacy conducted by various studies on different behavior domains, the relationship between the constructs in the SCT model, with the subjective norms and emotion as supplementary constructs, can display the ability of the model to understand, explain, and predict the panic-buying behavior phenomenon in Indonesia. This study shows a statistically significant test result for each of the relationships between the constructs.

Further, this study also shows that respondents who display panic-buying behavior tend to rely on self-efficacy, which is considered to be sufficient for influencing the expected social impacts and emotions needed to perform panic buying. Overall, the results of this study show that the centrality of self-efficacy is a major part of the social psychology theory, which helps in explaining the triadic relationship of attitude-intention-behavior. Therefore, the result of this study can be generalized, it is comprehensively systematic and theoretic, random, and controllable for understanding and explaining a phenomenon.

Limitations and Suggestions

This study only included respondents in three cities in Java, namely: Jakarta, Tangerang, and Banten. For further research, it would be better to involve respondents who are located in the big cities of Indonesia, other than those in Java, to generalize the research results properly. This research only looked into the behavior associated with panic-buying situations. Future research should replicate this research for other behaviors, for example, those related to health and using other products whose categories are related to health.

Theoretical Implications

The results of this study, theoretically, can determine the underlying mechanism which can influence the power of the proposed relationship in the SCT developed in this study. Further, it also confirmed that the SCT can explain and predict various factors that determine individual behavior, and define numerous individuals' basic abilities through these stages: starting with the formation of motivation cognitively, the performance of a certain behavior, and the outcomes pertaining to this behavior .

The results of this study also show the level of self-control of an individual, which is proxied as self-efficacy in the SCT model. According to the self-regulation principle, an individual would not behave as others would prefer and expect. According to the SCR, most individual behavior is formed and regulated by a set of internal standards and self-evaluation reactions toward a behavior.

Nonetheless, although some internal standards have been set, there are social influences toward future behavior when there is any inconsistency between the behavior and the established internal standards. The results of this study confirmed that when panic-buying behavior does not conform with a set of internal standards, then an individual will consider some social factors in his/her future behavior. When there is an inconsistency between self-standards and performance, then according to the SCT, an individual will set a higher standard and display behavior in the future that fulfills this new standard, based on the influence of the social environment. For example, the success of an empowerment program will depend on an individual's ability to self-regulate, and the social environment around that individual.

Managerial Implications

The results of this study can be used as a basis for companies to identify the social factors that underlie the intentions and consumption behavior of Indonesians when they are in a panic situation and worried about the scarcity of the goods they feel they need. Based on this, companies can design strategies and tactics for dealing with a panicking public's consumption behavior in situations and conditions of non-natural disasters, so the losses from panic-buying behavior can be avoided.

Furthermore, the results of this study may serve as the foundation for policymakers to regulate supply shortages to solve panic-buying situations. The citizens' behavior in panic buying is potentially damaging for stakeholders, such as food producers, supply chain transportation operators, retail store managers, the population in general, and the environment. Therefore, stakeholders need to examine carefully the importance of managing the potential shortages perceived by consumers, to enhance the management of panic buying, so its destructive impacts may be minimized.

The results of this study exhibit the importance of maximizing the reference groups' and social impact's factors to minimize consumers' exposure toward signals to behave. For example, to reduce the triggers that encourage consumers to panic buy, the government may consider delivering more information and advice on public platforms and social media regarding the adequate supplies of products during the pandemic. Additionally, the involvement of public and religious figures may be considered to confirm that the general public do not to fear shortages of products during the pandemic, so the public's perception of possible shortages may be minimized. The role of family and friends needs to be enhanced to deliver information regarding the necessity of protecting one's mental health, rather than encouraging other people to hoard products or buy in a panic.

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APPENDIX

Questionnaire

I. Respondent Identity

1. Name:..(You may leave it blank)

2. Gender: a. Male b. Female

3. Marital Status: a. Married b. Single

4. Last Education: a. High School b. Undergraduate c. Postgraduate

5. Age: a. < 30 Years b. 31 – 45 Years c. > 45 Years

6. Occupation: a. Civil or state apparatus b. An employee in a private company c. Entrepreneur d. Others

7. Monthly Spending :
   - ☐ Rp 0 – Rp 1,000,000
   - ☐ Rp1,000,001 – Rp2,500,000
   - ☐ Rp2,500,001 – Rp5,000,000
   - ☐ Above Rp5,000,000

II. Filling Instructions

1. Please place (X) on your most appropriate answers and fill in the spaces as required.

2. After filling in this questionnaire, please return it to the person who distributed it.

3. Answer Score:
   - a. STS = Strongly Disagree (1)
   - b. TS = Disagree (2)
   - c. R = Neutral (3)
   - d. S = Agree (4)
   - e. SS = Strongly Agree (5)

No.	**Self-Efficacy**	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Questionnaire Code
		1	2	3	4	5	
1	I'm confident that I have adequate information regarding the scarcity of goods that will occur during the COVID-19 pandemic.						**SE1**
2	I'm confident that I have adequate resources to purchase and hoard the necessary goods during the COVID-19 pandemic.						**SE2**
3	I'm confident that I could persuade others to purchase and hoard the necessary goods during the COVID-19 pandemic						**SE3**
4	I'm confident that I'm able to answer others' inquiries regarding the reason for purchasing and hoarding the necessary goods during the COVID-19 pandemic						**SE4**

No.	**Expected Social Impact**	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Questionnaire Code
		1	2	3	4	5	
1	I'm confident that citizens will support me in purchasing and hoarding the necessary goods during the COVID-19 pandemic.						**OSE1**
2	I'm confident that others like me purchase and hoard the necessary goods during the COVID-19 pandemic.						**OSE2**

3	I'm confident that purchasing and hoarding the necessary goods during the COVID-19 pandemic will help retailers to sell their products.						**OSE3**
4	I'm confident that by purchasing and hoarding the necessary goods during the COVID-19 pandemic I will feel like a part of the society that does not experience any scarcity of daily goods.						**OSE4**

No.	**Emotion**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Questionnaire Code**
		1	**2**	**3**	**4**	**5**	
1	I feel contented if I can purchase and hoard the necessary goods during the COVID-19 pandemic.						**E1**
2	I feel comfortable if I can purchase and hoard the necessary goods during the COVID-19 pandemic.						**E2**
3	I feel safe if I can purchase and hoard the necessary goods during the COVID-19 pandemic.						**E3**
4	I feel relieved if I can purchase and hoard the necessary goods during the COVID-19 pandemic.						**E4**

No	Subjective Norm	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Questionnaire Code
		1	2	3	4	5	
1	I'm confident that my family will agree if I purchase and hoard the necessary goods during the COVID-19 pandemic.						**SN1**
2	I'm confident that my friends will agree if I purchase and hoard the necessary goods during the COVID-19 pandemic.						**SN2**
3	I'm confident that my family also purchase and hoard the necessary goods during the COVID-19 pandemic.						**SN3**
4	I'm confident that my friends also purchase and hoard the necessary goods during the COVID-19 pandemic.						**SN4**

No	Intention of Panic Buying	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Questionnaire Code
		1	2	3	4	5	
1	I plan to purchase and hoard the necessary goods during the COVID-19 pandemic.						**BI1**
2	I intend to purchase and hoard the necessary goods during the COVID-19 pandemic.						**BI2**
3	I will purchase and hoard the necessary goods during the COVID-19 pandemic.						**BI3**
4	I want to purchase and hoard the necessary goods during the COVID-19 pandemic.						**BI4**

Actual Behavior

Do you purchase and hoard the necessary goods during the COVID-19 pandemic?

No: 1_;_2_;_3_;_4_;_5_:Yes

How many times do you purchase and hoard the necessary goods during the COVID-19 pandemic?

1: Never

2: Once

3: Between 2 and 4 times

4: Between 5 and 7 times

5: More than 7 times