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Impacts of the Scarcity of Health Appliances on Impulsive Purchases during the COVID-19 Pandemic in Indonesia

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Abstract: At the height of the COVID-19 epidemic in Indonesia in 2020, there was a serious shortage of medical supplies, which had a detrimental impact on impulsive consumer spending and public safety. This essay aims to comprehend why people make impulsive purchases during catastrophes and disasters such as COVID-19. Using the theories of scarcity and Stimulus, Organism, Response (SOR), this research investigates the impact of the lack of health equipment products on consumers' impulsive buying during the pandemic in Indonesia. In the end, 170 valid data sets from an online poll were obtained, and SmartPLS was used to analyze the data. The results show that impulse purchasing is significantly boosted by shortages. The results also show that while false news on social media moderates the connection between scarcity and impulse purchases, fear of missing out (FOMO) mediates the correlation between scarcity and impulse buying. In order to gain an advantage over competitors in future COVID-19 or similar crisis circumstances, marketers and brand managers will need to develop cutting-edge strategies to increase their brand's market share. The study's results are essential for understanding the abrupt shifts in impulsive buying patterns in Indonesia during an emergency, given the scarcity of health appliance products during the pandemic. This research can therefore contribute to our understanding of customers' irrational purchasing behavior. Businesses and the Indonesian government can take steps to reduce the impact, helping to ensure the country's safety throughout any future epidemic.

Keywords: scarcity, impulsive purchase, fear of missing out, social media fake news, pandemic, COVID-19

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Introduction

The worldwide economy, markets, and public health were all significantly impacted by the coronavirus (COVID-19) outbreak. One of the nations that was significantly impacted by the pandemic is Indonesia. Even though the Indonesian government implemented social distancing and lockdowns to stop the virus's transmission, the numbers of sick and dead constantly rose (Muthiya et al., 2021). This fact proves that coronavirus spreads quickly, resulting in an impact on life's activities (Maliana, 2021). This situation pushed the community into a fairly high state of panic, especially during the beginning of the pandemic (Zhang et al., 2021). Additionally, the public was driven to purchase or stockpile things linked to protecting them against illness, such as face masks, disinfectants, hand sanitizers, and vitamins, as a result of the ongoing hysteria about the COVID-19 phenomenon. During the beginning of the pandemic, stressed-out shoppers were more likely to make impulsive purchases (Widiyarti, 2020).

Impulse purchasing is an unplanned expenditure that is made with little to no planning, primarily out of emotion, and driven by an overwhelming desire to make a purchase (Verplanken & Herabadi, 2001b). Consumer fear might occasionally have led to unexpected buying habits during the COVID-19 epidemic. Consumers' top priorities were to purchase hand sanitizers, masks, and other necessities. Extremely terrified shoppers frequently made impulse purchases. This is a reference to Mehrabian and Russell's S-O-R (stimulus organism responses) model hypothesis (Mehrabian & Russel, 1974; Elisa et al., 2022). The phrase "impulsive purchase" describes extreme fear followed by a purchase. When a consumer buys a lot of something, in case of future shortages, this is referred to as an impulsive purchase (Eva et al., 2021). Impulsive purchasing has also occurred in other countries that have undergone calamities, whether they were natural (Fast et al., 2015; Wai Man Fung & Yuen Loke, 2010) or man-made (Li et al., 2017; Zhao et al., 2018).

When the epidemic first started, the majority of people made impulsive purchases, despite them already having a lot of the products, which caused a shortage of face masks, disinfectant, hand sanitizers, and other medical supplies (Huang & Zhao, 2020). For example, news that "Vitamins and 'Bear Brand' Milk Were Scarce Amid the COVID-19 Surge" (Pinandhita, 2021) caused people to buy them. Milk and vitamins were sought after by people all over Indonesia, due to the widespread popular perception that a range of foods and beverages could kill the COVID-19 virus, or protect people from it (Radiordk, 2021). These rash purchases increased public anxiety and caused supply shortages during the emergency (Elisa et al., 2022). The lack of supplies became a bigger issue because the perception of scarcity played a more significant role than the other factors influencing food hoarding (Nguyen et al., 2022; Patiro et al. 2022).

The two components of impulse buying, according to Verplanken and Herabadi

(2001a), are cognitive and emotive. The lack of thought and planning that went into the purchases is the cognitive aspect. Affective characteristics include emotional inclinations and after-purchase pleasure and joy (Muthiya et al., 2021). There is a strong impulse to spend frequently or obsessively, as well as a sense of immediate satisfaction, regret, and grief after spending money to fulfill one's wishes. One of the unfavorable emotions that the COVID-19 epidemic caused is anxiety (Julianti, 2020).

Supriyanto (2020) argued that people's actions, while buying or making transactions, will be impacted by anxiety. Information disseminated on the internet and through social media during the pandemic increased impulsive purchases (Elisa et al., 2022). Via the internet and social media, people could learn more about COVID-19 and share their stories and events related to COVID-19 (Xiao et al., 2020). According to reports, Indonesia had 202.6 million internet subscribers at the start of 2021 (Riyanto, 2021). With a population of 274.9 million, social media is the most popular online activity among Indonesian internet users. Indonesia is one of the world's most populous nations, in which 170 million people in Indonesia (around 60.1 percent) actively utilize social media (Elisa et al., 2022). They spend an average of 3 hours and 14 minutes on social media sites, and 1 hour and 38 minutes reading news from media outlets (online or in print) (Riyanto, 2021).

Social media serves as a platform demonstrating to consumers the simplicity of accessing information (Mayasari et al., 2023). The majority of Indonesians utilize the internet, or social media, to gather information, but misinformation could be dangerous to the citizens' flow of information (Pradana et al., 2020). There are claims that there were over 850 items of fake news about COVID-19 in Indonesia (Indriani, 2020). The community experienced panic, worry, and uncertainty as a result. The present COVID-19 pandemic offers a chance to examine how scarcity, brought on by highly ambiguous information from the internet or social media, affects Indonesian consumers' impulse purchases. The S-O-R model, which stands for stimulus, organism, and reaction, demonstrates how environmental stimuli can impact an organism's cognition and response to infection (Wu & Li, 2018).

Therefore, this study will identify scarcity through the fear of missing out (FOMO) that affects impulse purchases based on the S-O-R theory and scarcity. This research aims to make a significant theoretical contribution to the existing literature. In emergency and crisis scenarios, like the COVID-19 pandemic, we present empirical evidence for the phenomenon of impulse purchases, which are also offered as a novelty in our research, and as a contribution to the field of consumer behavior. In addition, based on the S-O-R theory, we use FOMO as a mediator to elucidate the psychological process of impulsive purchasing, in order to enhance our understanding of impulsive purchasing during the COVID-19 pandemic. This addition will enrich the emergency management literature, and

expand the application of the stimulus, organism, and reaction theory to impulse purchasing research. During the current COVID-19 pandemic, it can also promote the creation of methods to mitigate the panic and impulsive purchasing produced by social media's fake news. Overall, the research is anticipated to shed new light on how much scarcity influences impulsive purchasing, assist governments in better managing the COVID-19 pandemic, and lessen the worry and impulsive spending brought on by false information spread on social media during the COVID-19 pandemic.

Literature Review

S-O-R Model

Three components make up the S-O-R model, according to Lee and Yun (2015): stimulus, organism, and reaction. In general, stimuli are regarded as being external to people. In most cases, the term "organism" refers to the internal condition brought on by environmental stimuli. The outcome is a response, which might be either an avoidance or an approach activity (Elisa et al., 2022). In another explanation, the S-O-R model is based on the premise that environmental factors have an impact on people's affective (emotional) and cognitive (perceptual) reactions, which have an impact on their behavior (Jiyoung & Lennon, 2013; Lee & Yun, 2015; Y. Wu & Li, 2018).

Impulse purchases are an organism's reaction to stimuli related to a scarcity of health appliances or products, and the many forms of coping mechanisms (fear of missing out) that are discussed in this study. In Maslow's hierarchy of needs, physiological needs are the first and the most fundamental requirements for human survival. Food and water, clothing and shelter, and general health are fundamental physiological requirements that must be met before people may advance to the next stage of fulfillment (Karimah et al., 2021). Safety is also the next lower-level need that must be met. Protection against harm and theft, mental stability and wellbeing, financial security, and the security of one's health are all aspects of safety (Hale et al., 2019). Maslow's two primary basic needs also serve as explanations for why impulse purchasing was really high during the peak of the pandemic (Susanto et al., 2022).

Scarcity on Impulsive purchase

A supply-demand mismatch that results in scarcity leads to a lack of resources (Kristofferson et al., 2017). In marketing, a product is said to be scarce if it is only available temporarily, and in small amounts (Chen et al., 2021). Products have a limited supply, due to unit constraints that the vendor has made known to customers at the start of the offer (Gierl et al., 2008). For the product, consumers must contend with other buyers (Aggarw-

al et al., 2011). An offer that has a specified expiration date is referred to as a limited time offer (Chen et al., 2021). Customers will worry if they don't get the product in time, and will regret exerting all their effort if it is only available for a short period of time (Chiang et al., 2011). As a result, buyers believe that purchasing the goods now is worthwhile (Jang et al., 2015). Due to the increasing demand for health appliances, this study concentrates on their restricted supply.

The coronavirus pandemic psychologically increases our fear of dying. People may become more impulsive while thinking about this condition, which includes making impulsive purchases (Kotler & Keller, 2012). A purchase made on the spur of the moment is known as an impulse buy (Beatty & Elizabeth Ferrell, 1998). Similar to spontaneous desires, the intense need to buy something right away defines impulse buying (Rook, 1987). Stockpiles of necessities, including food and drink, medication, and other necessities, become limited as a result of impulse buying. Consequently, this has an indirect impact on those who don't partake in impulse buying (Harahap et al., 2021). Shou et al. (2011) defined impulsive purchasing as consumer behavior that involves making massive purchases of goods due to upcoming product shortages. The study examined how scarcity may impact these impulsive purchases using a scarcity model created by Wu et al. (2011). The scarcity model is therefore appropriate for our investigation. Therefore, based on the foregoing explanation, the first hypothesis is presented.

H1: Scarcity positively and significantly affects the impulsive purchase of health appliance products in Indonesia.

Fear of Missing out on Impulsive purchase

Higher-order personality traits including fear, neuroticism, impatience, and an inability to regulate oneself will be present in someone who is experiencing FOMO (Balta et al., 2020). The fear of missing out (FOMO) can feel like an intense yearning that lowers one's level of happiness (Abel et al., 2016). Some people are affected by the anxiety-inducing effects of COVID-19 in this scenario. Lockdown restrictions, for some or all of the area, will cause anxious residents to make impulse purchases (Ahmed et al., 2020). As a result, every person reacts differently. They separate themselves from the community and over-purchase staples, even to the point of becoming heavily involved in the procurement of both food and cleaning supplies (Addo et al., 2020).

For the majority of individuals, the act of purchasing is a customary and regular aspect of their everyday lives. Within the realm of the consumer behavior theory, individuals tend to exhibit specific patterns when it comes to making purchases (Negara & Dharmmesta. 2003). Among these behaviors is the phenomenon known as impulse

buying or unplanned purchasing. The terms "impulse" and "unplanned" purchasing have become widely recognized in the spheres of business leadership and marketing academia (Negara & Dharmmesta. 2003). Previous studies have demonstrated that poor planning is a major contributor to impulsive buying. While not all impulsive purchases are unplanned purchases (Kacen et al., 2012; Piron, 1991), unplanned purchases are defined as simply forgetting to buy something that is necessary (Iyer, 1989; Kartawinata et al., 2021), whereas impulse purchases are motivated by an emotion that emerges from irrationality (Amos et al., 2014). Purchasing activity, on the other hand, is seen as unplanned, rapid, and satisfying hedonic behavior. The customer in this case disregards the acceptable advantage that is being presented while thoroughly and logically assessing the available options, due to the haste involved in making this decision, which is a hallmark of an impulse purchase (Park et al., 2012). In addition, FOMO is also associated with an increase in smartphone use in the community (Przybylski et al., 2013). Therefore, the second hypothesis is proposed, based on the above description.

H2: FOMO positively and significantly affects the impulsive purchase of health appliance products in Indonesia.

Scarcity and Fear of Missing out on Impulsive purchase

FOMO can be interpreted as a deep fear that one feels left out of what others may have experienced (Przybylski, et al., 2013). Social FOMO was first described as "a pervasive apprehension that others might be having rewarding experiences from which one is absent" (Elisa et al., 2022). However, Yu et al. (2020) contend that people may experience a similar level of anxiety about losing control over COVID-19-related information. More specifically, the need for people to learn about and keep up with the most recent pandemic information is what fuels COVID-19 information FOMO, since it gives them a sense of informational control (Pradana et al., 2020).

Recent definitions of impulse purchasing vary, but generally speaking, they refer to the spontaneous and direct purchasing of a product without serious analysis of the alternatives and their long-term repercussions (Moon et al., 2017; Pradhan, 2016). Unplanned purchases are another name for impulse purchases (Kalla & Arora, 2011; Ling & Yazdanifard, 2015). The majority of consumers are concerned about missing out on the chance to purchase health appliance items, due to the shortage of health appliance products during the COVID-19 pandemic. This encourages customers to buy them right now. According to Zhang et al. (2021), who examined the impact of perceived shortages on FOMO-mediated alternatives, this viewpoint was supported. Due to scarcity, consumers must decide between purchasing now and passing up the chance to do so (Shi et al., 2020).

FOMO benefits from scarcity (Föbker, 2018; Hodkinson, 2016). Additionally, it was discovered that FOMO affects buying decisions and directly affects impulse purchases (Abel et al., 2016). According to this idea, there may be a link between scarcity, FOMO, and impulse purchasing (Zhang et al., 2021). According to the S-O-R model's point of view, the environment's stimuli impact a person's emotions, which in turn affect that person's conduct (Wu & Li, 2018). Therefore, based on the description above, we propose the third and fourth hypotheses.

H3: Scarcity positively and significantly affects the fear of missing out on health appliance products in Indonesia.

H4: FOMO mediates the relationship between scarcity and the impulsive purchase of health appliance products in Indonesia.

Social Media Fake News as a Moderating Variable on Scarcity's Effect on Impulsive purchase

People restricted their outside activities as a result of the COVID-19 pandemic, in order to reduce their risk of catching the disease. As a result, they used social media to obtain news or information about COVID-19. People now utilize smartphones to access social media platforms like Facebook, WhatsApp, Instagram, and Twitter, in order to stay entertained and get news (Ahmed et al., 2020). As a result, social media are becoming important for facilitating communication between people, and for disseminating information on COVID-19 (Addo et al., 2020). Therefore, false information will impede the effectiveness of the COVID-19 response, and increase people's anxiety and terror during the epidemic (Limaye et al., 2020; Hasbi et al., 2021). As COVID-19 instances increase in Indonesia, false information is being circulated on social media, such as references to certain beverages and foods that can treat COVID-19. Therefore, the WHO call it an "infodemic," which means "the abundance of misinformation, disinformation, and rumors that make it difficult to identify reliable sources of information" (Garrett, 2020).

An infodemic has developed concurrently with the fresh COVID-19 pandemic outbreak, with an excessive amount of (correct or inaccurate) information being shared on social media and throughout 24-hour news cycles (Gallotti et al., 2020). Many people have been tempted to closely watch events at any given time, out of anxiety that they may miss out on important (or reassuring) information, especially in light of the individual and societal uncertainties linked to the pandemic (Koffman et al., 2020).

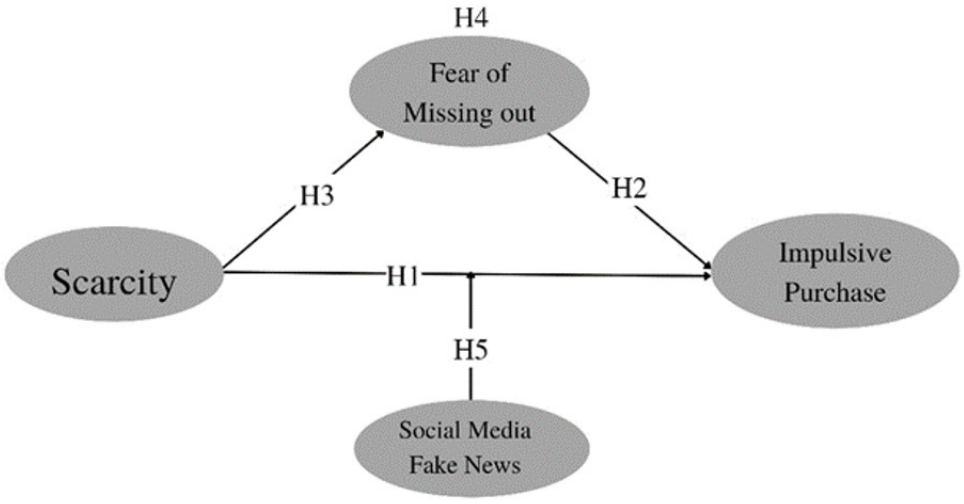
Inaccurate information may have an impact on Indonesian customers' purchasing habits. Large-scale impulsive purchases place an emphasis on seeking solace from the current viral epidemic (Ullah et al., 2022). The majority of customers buy things on impulse,

in order to feel secure (Elisa et al., 2022; Arifianti & Gunawan, 2020).

A previous study has explained the strong effect fake news on social media has on impulse purchasing (Ahmed et al., 2020). However, we maintain that fake news on social media is a moderating variable. We feel that fake news on social media might act as a moderating variable considering its effect on impulse purchasing, which affects product scarcity (Di Domenico et al., 2021), but it is not strong enough to produce a strong direct effect on impulse buying (Elisa et al., 2022). Therefore, based on the description above, the fifth hypothesis is proposed.

H5: Fake news on social media moderates the impact of scarcity on the impulsive purchase of health appliance products in Indonesia.

Figure 1. Research Model/Conceptual Framework



Metodology

The study's data were gathered through online questionnaires. In the study, the authors also used convenience sampling, which is a non-probability sampling technique. A total of 170 respondents were contacted through social media and asked to complete a survey questionnaire. The choice of 170 as the sample size was made by the author, based on a number of suggestions from other authors regarding the minimum and recommended number of samples for a study utilizing the structural equation model (SEM) method. Kline, (2016) asserts that 200 respondents should make up the minimal sample size for SEM surveys. Hair et al. (2010) contend that 5 to 10 times the number of indicators uti-

lized in the study should be the proper sample size for the investigation. There were a total of 17 indicators included in the study for various goods or indicators. Each and every indicator was designed to take into account the respondents' actions at the height of the COVID-19 outbreak in Indonesia. Social media's fake news (three items) from Ahmed et al. (2020), scarcity (four items) from Wu et al. (2011), FOMO (five items) from Zhang et al. (2021), and impulse purchases (five items) from (Ho & Lim, 2018). All the items were rated on a 5-point Likert scale (1 = strongly opposed and 5 = firmly in agreement). Software called Smart PLS was used to evaluate the data gathered from the survey questionnaires. The entire information estimate method, utilizing Smart PLS software, was used for the analysis because SEM is one of the most in-demand approaches by marketing researchers for evaluating new theoretical models with various complex social structures (Wang et al., 2018). PLS-SEM is a tool for more in-depth statistical analysis. It is suitable for estimating intricate models with many constructions (Zhang et al., 2021). With one variable acting as a mediator and one acting as a moderator, for a total of four variables, the current model was complex, making PLS-SEM an appropriate method for this investigation. We also measured the mediating effects by using the Sobel test (Abu-Bader & Jones [2021]). The following section will go over the analysis of the data, and how to interpret the findings.

Table 1. Indicators/Measurement Items

Variable	Indicator	Description
Scarcity	SC1	I think that the supply of health appliance products is only limited during the pandemic
	SC2	I think health appliance products are quickly sold-out during a pandemic
	SC3	I think that many people will buy health appliance products during a pandemic
	SC4	I think the limited supply of health appliance products for each person will cause people to buy a lot of them
Fear of Missing out	FM1	I am anxious about missing the chance to get health appliance products during the pandemic
	FM2	I also buy health appliance products, like other people do, during the pandemic
	FM3	I get worried when others buy health appliance products
	FM4	I fear running out of health appliance products when other people stock-up on them

	FM5	I follow others' shopping patterns for food appliance products
Social Media Fake News	SMFN1	During the COVID-19 phenomenon I have relied on information from social media more
	SMFN2	The social media news provided both misinformation and information during COVID-19
	SMFN3	The fake news on social media has an influential impact that pushed me toward more impulse purchases of essential & non-essential items
Impulsive Purchasing	IP1	I often buy scarce health appliance products spontaneously
	IP2	The way I buy goods is described by the phrase "just do it"
	IP3	I often buy scarce health appliance products without thinking
	IP4	I occasionally feel compelled to purchase health appliance products on the spur of the moment.
	IP5	Sometimes I am a bit reckless about purchasing health appliance products

Results

This study focused on the purchasers of health appliance products in Indonesia. All the data were collected using questionnaires, which were distributed through social media (e.g. WhatsApp, Line, and Instagram) due to the large number of consumers spread across the various regions in Indonesia. The questionnaires were distributed on social media for two weeks (from October 11 to October 24, 2021). The majority of respondents were women (64%), most respondents were aged between 17 and 25 years old (72%), and the vast majority of the respondents were students (67%). In addition, the majority of respondents earned IDR 3,500,000 or less (71%) and many of the respondents considered that health appliance products would be difficult to find during pandemics (58%). A complete analysis of the respondents' profiles is shown in Table 2.

Table 2. Respondents' Profiles

Profil	Criteria	Percentage
Gender	Male	36%
	Female	64%
Age	17-25	72%
	26-35	10%
	36-45	5%
	46-55	9%
	56 over	4%
Occupation	Student	67%
	Entrepreneur	8%
	Government employees	9%
	Other	16%
Income (IDR)	3,500,000 or less	71%
	3,500,001 – 4,500,000	14%
	3,500,001 – 4,500,000	6%
	5,500,000 and above	9%
Health appliance products are scarce	Yes	58%
	No	42%

Measurement Model (Outer Model) Assessment

In order to determine the connection between each variable and obtain the study's findings, the data were processed after the interviewees' profiles had been examined. However, all the data must first satisfy the requirements of validity and reliability in the measurement model's analysis, in order to determine the connection between the factors. The first step in evaluating PLS-SEM results is to test the outer model. To evaluate the relationship between the indicator variables and the related constructs, the measurement model is utilized. It determines the indicators used to establish measurements and directional relationships between the constructs and indicators (Zhang et al., 2021).

We checked the value of' the standardized root mean square residual (SRMR) before moving forward with the data analysis, to ensure the model's goodness of fit. Henseler et al. (2015) state that any number higher than 0.08 and less than 0.10 indicates a satisfactory model fit. It was found that the SRMR value was 0.095. The match was good enough to permit further calculations (Hendrayati et al., 2019; Li et al., 2022).

Table 3 shows the results of the reliability tests and the overall validity. All Cronbach's alpha (CA) and composite reliability (CR) values met the expected values, i.e., greater than 0.7, and the value for AVE was above 0.5 (Hair et al., 2012, 2014). Discriminant validity was achieved because the value of AVE on each construct was greater

than the squared correlation between the constructs (Gupta & Gentry, 2019). Thus, we concluded that all the data met the criteria of the measurement model. After the data were considered valid and reliable, an assessment of the structural model (inner model) of the data was made to reveal the existing relationships between the variables. The results of the measurement model's assessment are shown in tables 3 and 4.

Table 3. Measurement Model Analysis

Variables	Indicator/ Items	Factor Loadings	Cronbach's Alpha	Composite Reliability	AVE
FOMO	FM1	0.830	0.872	0.908	0.664
	FM2	0.748			
	FM3	0.919			
	FM4	0.767			
	FM5	0.800			
Impulsive Purchasing	IP1	0.816	0.893	0.921	0.701
	IP2	0.894			
	IP3	0.844			
	IP4	0.853			
	IP5	0.777	0.704	0.807	0.513
Scarcity	SC1	0.816			
	SC2	0.717			
	SC3	0.694			
	SC4	0.625			
Social Media Fake News	SMFN1	0.833	0.729	0.844	0.644
	SMFN2	0.747			
	SMFN3	0.825			

Table 4. Discriminant Validity Analysis

	Fear of Missing out	Impulsive Purchasing	Scarcity	Social Media Fake News
Fear of Missing out	0.815			
Impulsive Purchasing	0.565	0.838		
Scarcity	0.371	0.477	0.716	
Social Media Fake News	0.446	0.609	0.448	0.803

Structural Model (Inner Model) Assessment

After the results of the assessment showed a satisfactory measurement model, the next step was to do an assessment on the structural model (Hair et al., 2017). In a structural model, each hypothesis is associated with a causal relationship, and the hypothetical relationship of a structural model is commonly evaluated using a path coefficient (Hair et al., 2017). In principle, the value t determines the statistical significance of the coefficient (Hair et al., 2017; Urbach & Ahlemann, 2010). The critical values commonly used in two-sided testing are 1.65 (significance level = 10%), 1.96 (significance level = 5%) and 2.57 (significance level = 1%) (Hair et al., 2017).

Table 5. Path Coefficient

Hypotheses	Path	Path Coefficient	Sample Mean	Standard Deviation	t-values	p-values	Results
H1	Scarcity→Impulsive Purchasing	0.227	0.230	0.102	2.234	0.026	H1 supported (Significant)
H2	FOMO→Impulsive Purchasing	0.311	0.332	0.105	2.971	0.003	H2 supported (Significant)
H3	Scarcity→FOMO	0.371	0.387	0.085	4.346	0.000	H3 supported (Significant)
H4	Scarcity→FOMO→Impulsive Purchasing	0.115	0.128	0.048	2.397	0.017	H3 supported (Significant)
H5	Moderating Effect 1→Impulsive Purchasing	0.104	0.102	0.063	1.674	0.099	H4 supported (Not Significant)

The path coefficients acquired by executing the model's assessment structure were also utilized to examine whether the hypotheses given in this study were supported or rejected. For example, a hypothesis would be supported if the hypothesis's t-value (relationship between variables) was greater than the cut-off value of 1.96. In contrast, the hypothesis would be rejected if its t-value (relationship between variables) was lower than the cut-off value of 1.96.

In the table above, Scarcity→Impulsive Purchasing obtained a value of significance, which was calculated at 2.234>1.96, with a significance level of 0.026<0.05, and the path coefficient value was positive at 0.227, which suggested that there was a positive and substantial link between shortages and impulse buying. Thus, this research concluded that scarcity had an acknowledged impact on impulse buying. Additionally, favorable associations demonstrated that people were more likely to make impulsive purchases as scarcities rose. The sample in this research was a community of consumers of health appliance products, and there was a strong scarcity connection to their impulse to buy, so it could be applied to the complete population. This makes it crucial to pay attention to how scarce health device goods are.

FOMO→Impulsive Purchasing obtained a significant value in the study, which was t calculated at 2.971>1.96, with a significance level of 0.003<0.05, and the path coefficient value was positive at 0.311, which suggested that there was a positive and substantial link between FOMO and impulse spending. The research concluded that FOMO had an impact on spontaneous buying. Positive correlations indicated that people were more likely to make rash purchases as FOMO increased. The group in this research was a community of consumers of health equipment products, and given that there was a strong correlation between FOMO and impulsive buying, it could be applied to the entire population as a whole.

Scarcity→FOMO obtained a value of significance of 4.346>1.96, with a significance level of 0.000<0.05, and a path coefficient value of positive 0.371, which suggested that there was a positive and substantial link between shortages and FOMO. Therefore, this research concluded that shortages had an acknowledged impact on FOMO. Additionally, the favorable association demonstrated that people dreaded missing out on health appliance goods because of the products' scarcity.

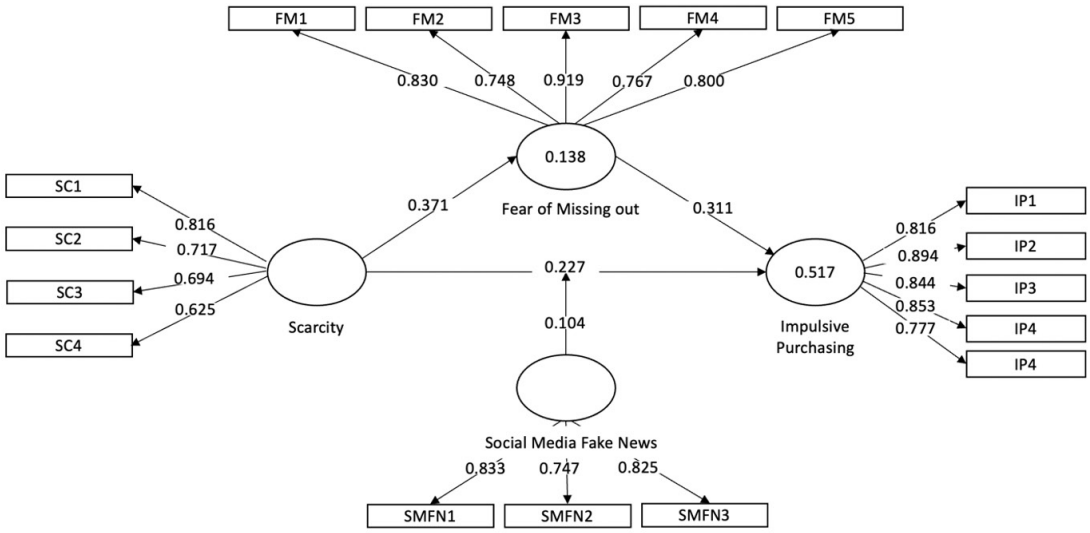
Moderating Effect 1→Impulsive Purchasing obtained a value of significance in the study, namely t calculated at 1.674<1.96, with a significance level of 0.099>0.05, and the path coefficient value of 0.104, which indicated that the direction of the relationship between Moderating Effect 1 and purchasing impulsiveness was positive, but not significant. This result showed that social media's moderation was influential, but not significant, on the impulsive purchasing of health appliance products.

In addition, the table above shows the mediation effect of FOMO; it demonstrates that the indirect influence of Scarcity→FOMO→Impulsive Purchasing obtained a value in the study, which was t calculated at 2.397>1.96, with a significance level of 0.017<0.05, and the value of the path coefficient was positive at 0.115, which suggested that there was a positive and substantial connection between shortages and impulse buying, brought on by FOMO. Therefore, this research concluded that scarcity influenced impulsive buying through the accepted dread of losing out. Positive correlations indicated that people were more likely to buy health equipment items spontaneously, as their scarcity rose, but they must first experience the fear of losing out. The path coefficient value of scarcity to FOMO was 0.371, with a standard error of 0.056 and a significance value of 0.010, then for the path coefficient of FOMO to impulsive purchasing, a coefficient value of 0.311 was obtained with a standard error of 0.068, and a significance value of 0.000. We analyzed the mediating effect by using Sobel's test (Abu-Bader & Jones, 2021). The Sobel test's result was 3.763, so FOMO had a significant effect as a mediating variable (3.763 > 1.96). All these results are visually depicted in Figure 2.

Model Specification and Assessment using PLS-SEM

The partial least squares - structural equation modeling (PLS-SEM) was deployed to assess the research model. This involved two steps (Ringle et al., 2015). First, the measurement model was examined, and then the structural model was assessed. The conceptual framework of this study is depicted in Figure 2.

Figure 2. Assessing the Measurement Model



Discussion

This research examines how the scarcity of health appliance products impacted Indonesian consumers' impulse purchases in response to the COVID-19 epidemic. Due to the partnership between the COVID-19 pandemic and the 2020 infodemic, this public health concern is now more likely to occur (Jahrami et al., 2021). Health experts have issued a warning against extensive reporting because it has been found to have a fatalistic impact on individuals and society (Stainback et al., 2020). International updates regarding COVID-19 are fueling the 24-hour cycle continuously.

According to this study, there may be behavioral (like impulse buying) and motivational (like FOMO) components that become linked when news is consumed during a pandemic or infodemic. This cycle of reciprocity could eventually result in the formation of undesirable behaviors (Shabahang et al., 2021). Unexpectedly, we also found insightful longitudinal data indicating that COVID-19 FOMO can act as a trigger for impulse purchasing. Together, these results suggest that the lockdown's finite energy supplies may be significantly depleted by the rising concern over (information) restrictions. People may

get fearful and compete with one another to find a sense of security when inaccurate and distracting information is being spread in the neighborhood. Impulse buying is one of the key steps to satiating basic requirements, or else wasteful conduct will emerge. Wasteful behavior is defined as impulse purchases made to satisfy wants rather than needs. The advantages of such purchases must be considered before the necessities, and vice versa (Aisa, 2016).

These results suggest that FOMO plays a mediating role in the relationship between scarcity and impulse purchasing. It suggests that the increasing scarcity of health appliance products is raising customers' fear of missing out on these products, causing them to be more impulsive in purchasing them. The S-O-R model, which asserts that environmental stimuli affect an individual's emotions, which in turn drives behavior, is supported by this research (Wu & Li, 2018). Further evidence is provided by Zhang et al. (2020), who contend that FOMO mediates the connection between customers' perceptions of scarcity and their decisions. This discovery sheds light on the role that emotion plays in consumer behavior.

In addition, the study showed that fake news on social media moderated the relationship between the scarcity of health appliance products and impulsive purchases. The effect of scarcity on impulsive purchases by customers is determined by the amount of fake news on social media. Higher levels of fake news lead to impulsive but insignificant purchases. This result is contrary to previous research, which found fake news on social media had a strong and positive impact on impulse buying (Ahmed et al., 2020), especially during a public health crisis. Large quantities of information circulating on social media can lead to information overload and information anxiety, thereby stimulating an individual's impulse buying behavior, due to him/her experiencing uncertainty about COVID-19. It should be noted that there are several things that affect these results. Iliah and Aswad (2022) argue that the factors that influence impulsive purchases consist of many factors, such as gender, internet addiction, hedonic shopping motivation, materialism and promotions. In the end, our findings add innovation by bringing up factors like FOMO and false news on social media as novelties, which also offer contributions to the fields of consumer behavior and business management discussions, aside from psychology or communication science discussions.

Lastly, because impulsive purchases account for the great majority of sales, the study's model suggests that impulsive consumption behavior can successfully promote consumption and mitigate the effects of COVID-19 on economic activity (Zhang et al., 2021). This research can advance the research, by providing managerial and academic insights for governments and marketers after a pandemic, assisting in restoring the national economy, and encouraging consumption and market engagement. With FOMO and product scarcity, consumers become impulsive and are encouraged to continue consuming.

Conclusion

This study examines the impact of scarcity on impulse purchases, with fake news on social media moderating the relationship, and FOMO mediating the relationship between scarcity and impulse purchases. The results showed a significant positive association between scarcity and impulse purchases at the time of the COVID-19 pandemic. Therefore, it can be concluded that the greater the scarcity of health appliance products, the higher will be the tendency for individuals to make impulsive purchases. The lower the scarcity of health appliance products, the lower will be the tendency of individuals to make impulsive purchases.

The results show that impulse purchases are associated with the fear of missing out, especially in the current pandemic conditions. Therefore, every individual needs to understand the spread of the virus, so they understand when to buy an item. Individuals are also expected to reduce their consumption of news that is not guaranteed to be true. After all, this study has identified that scarcity through the fear of missing out (FOMO) affects impulse purchases based on the S-O-R theory and scarcity. However, fake news on social media did not show any essential moderating effect on those variables.

The impact of social media, which disseminate news containing both positive and negative information, will have an effect on impulse purchases. However, based on our results, which did not show a significant effect of social media's fake news, we conclude that a lack of information combined with false or misleading information, spread via social media, will in the end undermine the public's trust. Out of a fear of the unknown, people begin to buy and keep buying. Furthermore, overusing social media and news media will reinforce the sense of panic buying. Therefore, it is crucial that reliable news sources stay away from rumors, and do things that could avert a potential crisis (Naeem, 2021).

The most recent events brought on by the worldwide coronavirus (COVID-19) outbreak made everyone fearful and anxious, and they adopted a protective attitude toward themselves and their families; in order to prevent the outbreak affecting them, they made hasty purchases to satisfy their needs and desires, regardless of the plague that caused impulsive purchases. With the increasing awareness of individuals toward the prevention of COVID-19 infection, the fear that arises will be more easily overcome through various efforts to increase immunity and self-defense, but it is still wise to buy enough goods to meet one's needs. Additionally, the COVID-19 pandemic outbreak caused an unprecedented level of uncertainty in many people, which was only exacerbated by the expanding infodemic. Engagement with positive news is crucial to learning about the pandemic, especially in the early months. This research shows a significant desire to be fully informed about the most recent pandemic-related developments, despite the requirement for this (i.e., COVID-19 FOMO information). It may be a part of a possibly hazardous reinforcing

loop given its connections to FOMO's COVID-19 information. In light of all of these findings, researchers and decision-makers may be alerted to the need to integrate COVID-19's infodemic aftermath in the recent recommendations for a global plan for post-pandemic public health (Reid et al., 2021).

People are expected to filter the news they consume from social media, so as not to be easily influenced and increase their fear of fake news. The public is also encouraged to prevent the spread of the virus by maintaining cleanliness, wearing masks, paying attention to their food intake, and applying social and physical distancing. This can provide a sense of security, minimize the scarcity of health appliance products, and the fear that can lead to other behaviors, one of which is impulse purchasing. Future research may further examine other variables that could be associated with impulse purchases. Future research may also consider other factors that could influence impulsive purchases, and more specific subject characteristics.

Recommendation and Implication

These findings provide some theoretical additions to the body of research on scarcity, impulse buying, FOMO, and fake news on social media. This bolsters the S-O-R model's claim that scarcity influences consumers' impulse purchases. The majority of the earlier research had focused on identifying one theory explaining how scarcity influences impulse purchasing. The results of this study show how emotions and the perception of scarcity interact (FOMO). The study positions bogus news on social media as a moderator between scarcity and impulse buying, adding to the body of information on the effects of this phenomenon.

Additionally, a new model that will precisely reflect the impact of scarcity is being developed, using recent studies on scarcity and impulse purchases. This study dissects the numerous ways that scarcity influences consumers' impulsive purchases, which may aid marketers in better comprehending these effects and creating efficient strategies. Marketing professionals can focus on a variety of mediating processes to reduce the negative effects of scarcity on consumers' purchase intentions (emotions or perceptions).

Our research has several practical implications for media practitioners, policymakers, and the broader public. Media literacy should be improved, to fight the "infodemic" and halt impulsive buying. This study found a clear, favorable, but not statistically significant relationship between scarcity and social media's fake news, causing impulse buying. Every individual in the internet age needs to develop a certain level of media information literacy, in order to combat false and repetitive information, as well as to reduce the worry and fear caused by information that is not always true. In particular, the general

populace needs to actively cultivate the capacity for knowledge discrimination and critical thought. In order to prevent unnecessary impulse purchases prompted by fear, it is essential to be vigilant and confine the "rumor virus," in addition to having the core knowledge and skills needed for the scientific prevention and control of COVID-19. The Indonesian government may benefit greatly, in many different ways, from this research. It will give people more influence over the market before a disaster and aid in maintaining order in society.

By reducing people's fear of missing out, limiting the number of health appliance goods depending on population size, or utilizing PR tactics to reduce people's fear of missing out, the government may, for instance, aim to prevent people from making impulsive purchases. These strategies might lessen impulsive consumer spending, which will help the government keep the peace. This result can aid in the understanding of how scarcity can be utilized as a marketing strategy to persuade consumers to purchase items they do not require, which can aid people in maintaining emotional control and preventing illogical purchases. Given that uncommon items are typically more expensive, it can also enable customers to spend more wisely (Lim, 2015; van Herpen et al., 2009).

Limitation

Research Limitations and Suggestion for Future Research

Regarding the study's limitations, although 170 validity surveys were gathered in Indonesia, the procedure was time-constrained. Because Indonesia has a large population, the response cannot encompass all the consumer views within Indonesia. Second, "organism" in the SOR paradigm stands for emotional and cognitive processes. The research, however, concentrates on the (affective) dread of losing out as a mediator. Third, the study was cross-sectional in nature. A cross-sectional research design can be thought of as a correlational term at most. Hence, there are only a few possible causative conclusions that can be drawn from the results. Extrapolation of the results outside the goods examined should be done with greater care in any future research, because the findings of this study are only directly relevant to one particular product group. Researchers may decide to look at scarcity and impulse buying in other sectors, or with regard to products that are becoming uncommon as a result of customers' fear purchases in the context of COVID-19. Finally, even though the sample size was sufficient to yield pertinent findings, it could be expanded, probably by including other regions of Indonesia, to provide a more comprehensive comparative study across the entire country. This result could be taken into account as a component of a broader comparison study of Indonesia. Furthermore, comparative studies between nations, or periods within the same country, are feasible due

to the variety of COVID-19 conditions and societies in different countries. To improve the model's breadth and explanatory power, a future study may also include novel structures related to the effects of scarcity.

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