



## Offline Shopping During the COVID-19 Pandemic : Between Need and Fear

Hardius USMAN<sup>1</sup>, Nucke Widowati Kusumo PROJO<sup>2</sup>, Chairy CHAIRY<sup>3</sup>

<sup>1</sup> *First Author* Associate Professor, Politeknik Statistika STIS, Jakarta, Indonesia.  
E-mail: hardius@stis.ac.id

<sup>2</sup> *Corresponding Author* Assistant Professor, Politeknik Statistika STIS, Jakarta, Indonesia.  
E-mail: nucke@stis.ac.id

<sup>3</sup> *Co-Author* Professor, President University, Bekasi, Indonesia.  
E-mail: chairy@president.ac.id

Received: February 16, 2022. Revised: October 05, 2022. Accepted: October 08, 2022.

---

### Abstract

**Purpose** – The purposes of this research are: (1) Building and testing a research model that integrates Theory of Reasoned Action (TRA) with fear, perceived risk, and health protocols; (2) Examining the impact of compliance with health protocols on consumer behavior when offline shopping.

**Research design, data, and methodology** – The data collection uses the self-administered survey method, and the questionnaire is distributed online. A total of 504 Indonesian population aged 18 years old or more participate in this research. Data are analyzed using factor analysis, multiple regression, and multiple regression with interaction.

**Result** – This study reveals several findings: (1) Attitude and subjective norm have a significant effect on offline shopping behavior; (2) fear has a direct and indirect effect on offline shopping behavior; (3) the effect of perceived risk on the intensity of offline shopping is determined by compliance with health protocols.

**Conclusion** – This paper discusses the direct influence of attitudes and subjective norms on behavior. This research also integrates fear, perceived risk, and health protocol factors in TRA, which may not have been done much, especially in the COVID-19 pandemic context.

**Keywords:** TRA, Fear, Perceived Risk, Health Protocols, Consumer Behaviour, Offline Shopping

**JEL Classification Code:** M10, M31.

---

## **1. Introduction**

The human-to-human transmission, which is identified as the cause of the rapid corona virus spreading (Liu et al., 2020; Chaplin, 2020), caused many governments to impose strict social restrictions. Such as limiting activities, putting people in quarantine, stopping activities in public facilities such as schools, forbidding people to gather on a large scale (Anderson et al., 2020; Farooq et al., 2020). The drastic changes in the external environment caused by COVID-19, followed by government policies, have various effects on the business of the retail industry. Retail e-commerce, which has proliferated in recent times, and continues to operate during a pandemic, is generally less reliable by entrepreneurs as a solution to reduce the impact felt by offline retail because the proportion of offline retail sales is still much higher than e-commerce. In 2020 offline retail sales in the United States 85.5% of total retail sales (U.S. Bureau of the Census, 2020); the United Kingdom 72.5% (Rhian, 2020); Germany 88.8% (von Abrams, 2020a); France 87.8% (von Abrams, 2020b); Canada 91.3% (Briggs, 2020); and Latin America 94.4% (Ceurlvels, 2020). In other words, if the pandemic continues and the government is forced to take a policy of closing land-based retail, the retail business will continue to suffer.

Sarkar and Das (2017) revealed that consumers' shopping methods depend on their desire. Some consumers prefer to shop in traditional land-based retail stores because they like personal interaction with sales assistants and can make physical contact with products (Levin et al., 2005), have an authentic experience (Sarkar and Das, 2017), conduct physical evaluations directly from the product they want (Levin et al., 2003). Not only that, consumers go to retail stores for socializing, diversion, utilitarianism (Jin and Kim, 2003), and recreation (Tiwari and Abraham, 2010). These reasons for choosing offline shopping are what consumers should avoid during the COVID-19 pandemic. Moon et al. (2021) revealed that the COVID-19 pandemic increased consumers' desire not to meet others. However, the fact shows that when the government of a region/country permits the operation of malls, shopping centers, supermarkets, or traditional markets, consumers are still busy visiting, even though they cannot be aligned with normal conditions. This phenomenon shows the high need for consumers to physically visit retail stores, including in risky conditions.

In studying the phenomenon of consumer behavior, researchers usually use the well-known theory of reasoned action [TRA] (Fishbein and Ajzen, 1975). Behavior arising from the intention to behave and intentions to perform certain behaviors is explained by two constructs: attitudes and subjective norms (Fishbein and Ajzen 1975). However, the literature warns of an 'intention-behavior gap' (Sheeran and Webb, 2016; Sniehotta et al., 2005), so it is advisable to investigate and describe the gap by exploring the factors that influence actual behavior (Chekima et al., 2017; Janssen, 2018; Shamsi et al., 2020), and studied additional theoretical frameworks and constructs (Tandon et al., 2020). In other words, researchers must be careful in interpreting a study that only focuses on the intention to behave because the intention is not automatically translated into a behavior. Sheeran (2002) revealed that although intention has a significant effect on behavior, the contribution of intention to explain behavior variation, which is indicated by the coefficient of determination, is relatively low, which is 0.28 on average.

In TRA, intention to behave predicts future behavior, so researchers have difficulty use the construct of intention and behavior simultaneously because they have to collect data at different times (Tweneboah-Koduah et al., 2019; George, 2004). It is what causes the literature to provide more insight into intention than actual behavior. By considering some of the literature above, this research will focus on the actual behavior of consumers in offline shopping. Several theories, such as the knowledge-attitude-behavior (KAB) model (Kallgren and Woods, 1986) and the attitude-behavior-context (ABC) theory (Guagnano et al., 1995), have described a direct relationship between attitude and actual behavior.

Another limitation of TRA in previous studies is in explaining behavior. The contribution of attitude and subjective norm in explaining the variation of behavior is relatively low so that it has limited predictive capability (Sniehotta et al., 2014). Therefore, many previous studies recommend adding another relevant variable to enhance predictive power (Mondéjar-Jiménez et al., 2016; Russell et al., 2017). For this purpose, this study will integrate TRA with several variables relevant to conditions. during the COVID-19 pandemic. Consumers could not go to the grocery stores due to their country's lockdown restrictions or their fear of contagion (Sheth, 2020). The threats brought by COVID-19, especially morbidity and mortality, along with their effects, have caused anxiety and fear among individuals worldwide (Ahorsu et al., 2020). Besides, when a person faces two factors: uncertainty and negative consequences, then a person's subjective perceptions of risk arise or known as perceived risk (Yuksel and Yuksel, 2007; Lu et al., 2005). Furthermore, Hong and Cha (2013) state that the higher the negative consequences and uncertainties, the higher the perceived risks. It causes retail sales to decrease sharply due to fears of infection, causing people to stay at home, refraining from external activities, and social distancing (Moon et al., 2021). The protection motivation theory [PMT] (Roger, 1975) explains a person's motivation in responding to threats or dangers. The threat related to the COVID-19 pandemic is exposure to the corona virus, which creates fear and perceived risk. In responding to these threats, a person will avoid everything that can expose him to COVID-19, one of which is offline shopping.

Even though they have strict social restrictions, some people can still carry out activities outside the home, including offline shopping. Outside activities mean having the opportunity to contact other people, making it a high possibility of COVID-19 transmission. To reduce the transmission risk, especially for those who are active outside the home, WHO (2020) recommends the public to comply with health protocols: (1) washing their hands frequently; (2) wearing masks properly; and (3) keeping a distance from other people. So, complying with health protocols, it is possible to reduce fear and perceived risk to encourage someone to shop offline.

Based on the explanation above, the research based on TRA and PMT has two objectives, namely:

- (1) Integrating TRA with fear and perceived risk in studying offline shopping consumer behavior and testing the research model formed.
- (2) Studying the impact of compliance with health protocols on consumer behavior when offline shopping.

## **2. Literature Review**

### **2.1. Theory of Reasoned Action (TRA)**

Fishbein and Ajzen (1975) explained that behavior arises from the intention to behave. Ajzen (2001) stated that the intention to behave indicates that someone is ready to show behavior. Intentions to perform certain behaviors are explained by two constructs: attitudes and subjective norms (Fishbein and Ajzen 1975). Rex et al. (2015) and Tucker et al. (2020) defined attitude as representing individual assessment toward behavior, whether positive or negative. Meanwhile, Fishbein and Ajzen (1975) defined subjective norms as social pressures enforced by considered important people, such as family members, friends, and work colleagues. Meanwhile, Hagger (2019) interpreted that the subjective norms indicate the beliefs of significant others who would want them to act the behavior.

Various concepts and previous studies explained in the literature review show the vital role of intention to behave in predicting behavior. However, to use the two constructs simultaneously in a model, the researcher must collect data at different times because the intention to behave is predicting future behavior. George (2004) stated an exact time frame between when the intention is calculated and when actual behavior is deliberated. Surveys that collect data on intention and behavior simultaneously should not place these two variables in one model (Tweneboah-Koduah et al., 2019).

KAB model (Kallgren and Woods, 1986) and ABC theory (Guagnano et al., 1995) explain the direct influence of attitude on consumer behavior. Based on these two theories, our research studies respondents' behavior towards offline shopping, where data is collected through a specific time survey. Besides, offline shopping is a behavior that many people have practiced. Therefore, the researcher does not include the intention to shop offline in the TRA model but directly on the behavior in offline shopping.

### **2.2. The Protection Motivation Theory (PMT)**

This theory describes the individual's cognitive process when confronted with risky outcomes, which initially focused on health research (Hudson et al., 2020). Protective motivation is a person's reaction to a threatening or dangerous situation and can lead to positive behavioral changes to overcome it (Roger, 1975). When an individual gets a message that threatens his safety or health, the individual changes his actions to eliminate the threat. Thus, it can be stated that individuals protect themselves by changing their actions (Maddux et al., 1983). In the context of this research, the threat faced by consumers is exposure to the corona virus. This threat creates fear and perceived risk in consumers. To protect themselves, consumers will change their behavior, including not doing offline shopping.

### **2.3. Fear**

Fear has an essential role in a significant threat situation (Leppin and Aro, 2009). The response that appears due to a threat is a form of visceral emotion, particularly negative cases, such as harmful emotions or bad states of feeling (Loewenstein, 2000). The trigger for the emergence of a negative emotional response is a relatively specific stimulus (Geer, 1965; McFarland, 1987), or a single, prominent threat (Bay and Algase, 1999; Pavuluri et al., 2002), from just a person's negative facial expressions to sudden environmental changes (Bay and Algase, 1999), including the COVID-19 pandemic. Fear is a reaction to external stimuli (Pavuluri et al., 2002), which directs a person to a specific behavior (Bay and Algase, 1999), especially removes from potentially dangerous situations or reduces or avoids risks (Zeelenberg et al., 2008; Weber, 2006). So, fear is a human "defense tool" for survival, even though fear can cause

discomfort, anxiety, stress, and even depression. The existence of a protection and defense system in humans caused by fear will be reflected in changes in one's behavior.

All of the world's population may receive terrifying information about the threats brought by COVID-19, especially morbidity and mortality, along with their effects. This information leads to the emergence of anxiety and fear among individuals worldwide (Ahorsu et al., 2020). Fear as a self-protection method (Weber, 2006; and Zeelenberg et al., 2008) develops defensive emotions (Boyatzis and Akrivou, 2006) and encourages many compensatory processes and behaviors to decrease anxiety (Greenberg et al., 1997). On the other hand, Izard (1991) revealed that fear is a compelling emotion that affects perceptions, thoughts, and behavior.

## **2.4. Perceived Risk**

Perceived risk is subjectively in making choice behavior (Bauer, 1960), which begins when a person faces two factors: uncertainty and negative consequences (Lu et al., 2005; Cox and Rich, 1964). Pavlou (2001) defines risk as a subjective estimate of losses incurred due to behavior to get the desired results. Perceived risk is threat appraisal, which can be interpreted as perceived vulnerability and perceived severity (Hudson et al., 2020). Risk can be viewed as an assessment instead of a reality that relies on the information and accepting individual (Aven and Kristensen 2005). Research has demonstrated that personal risk perception can encourage interpersonal interactions, which brings to the behavioral difference (Lee and Kotler, 2011; Paek et al., 2016) and motivates behaviors that respond to the potential risk (Rimal and Real, 2003). A high-risk perception brings a high chance of attempting action to deal with the threat (Kraus and Slovic 1988). In contrast, a controllable risk perceived is viewed as less alarming (Slovic et al. 1984; Slovic 1987).

Perceived risk is a vital element in various theories, such as the risk perception attitude framework (Rimal, 2001), the extended parallel process model (Witte, 1992), protection motivation theory (Rogers, 1983), and the health belief model (Rosenstock, 1992). 1974), use risk perception as an essential construct in major behavioral change theories. These theories have a general premise that threat messages develop personal risk perception (Hudson et al., 2020), and bringing behavioral difference (Lee and Kotler, 2011; Paek et al., 2016). Various studies have also been conducted to study the effect of perceived risk on consumer behavior, such as decision making to choose (Conchar et al., 2004), customer's satisfaction (Habel and Klarmann, 2014; Martin et al., 2015), and loyalty (Usman et al., 2004). al., 2020; Mulia et al., 2020).

Referring to Yuksel and Yuksel (2007), this study describes perceived risk as individuals' perceptions of the negative consequences associated with COVID-19 transmission. Hong and Cha (2013) stated that the higher the negative consequences and uncertainties, the higher the perceived risks. The transmission of COVID-19 is recognized as a human-to-human transmission (Liu et al., 2020; Chaplin, 2020), so the ideal way to avoid risk is not to interact with other people.

## **2.5. Health Protocol**

To prevent and abolish the escalation of COVID-19, many governments worldwide adopt strict social restrictions, with movement limitation, quarantine people, public services closure, and large public gatherings. (Anderson et al., 2020; Farooq et al., 2020). The strict social restriction policy still provides opportunities for residents to do activities outside the home, which means the possibility of contact with other people, which can result in contracting COVID-19. To minimize transmission of the virus, especially for residents who are active outside the home, the government requires the public to comply with health protocols recommended by WHO, namely: (1) Washing hands properly regularly using water and soap or a hands-on agent; (2) Wearing masks properly to cover mouth and nose when in public places; and (3) keep a distance from other people.

According to PMT, fear and perceived risk encourage action to protect oneself. Addo et al. (2020) revealed that the increased fear is closely related to the escalation of compliance behavior if the causative factor previously alerts the recipient about the potential harm. Thus, it can be said that fear and perceived risk will encourage consumers to comply with health protocols to protect themselves. When fear and perceived risk are reduced, it is possible for consumers to feel safe to do offline shopping. In other words, at the same level of fear, consumers with a high level of compliance with health protocols have a higher tendency to shop offline than consumers with a low level of compliance with health protocols.

### 3. Methodology

#### 3.1. Research Model & Hypotheses

The research model can be seen in Figure 1.

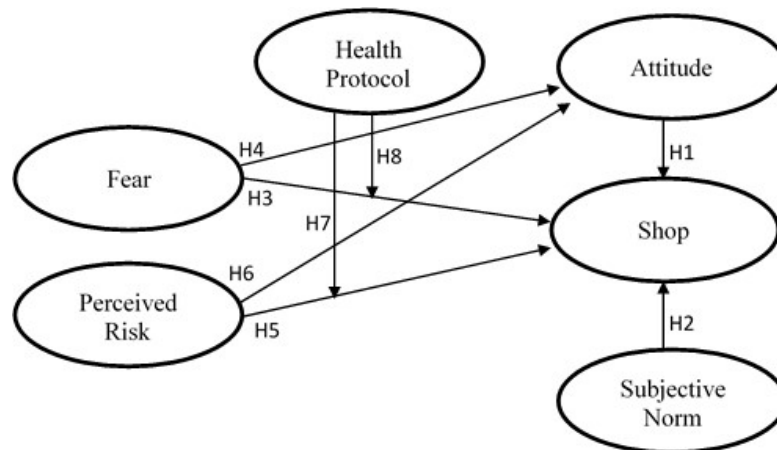


Figure 1: Research Model

Based on explanation on literature review, this study proposes hypotheses as follow:

**Hypothesis 1:** Consumers' positive attitude has a significant impact on offline shopping

**Hypothesis 2:** Subjective Norms that support consumers have a significant impact on offline shopping

**Hypothesis 3:** The fear of being exposed to the corona virus has a negative impact on offline shopping behavior.

**Hypothesis 4:** Attitude mediates the relationship between fear of being exposed to the corona virus and offline shopping behavior.

**Hypothesis 5:** Perceived risk has a negative effect on offline shopping behavior.

**Hypothesis 6:** Attitude mediates the relationship between perceived risk and offline shopping behavior.

**Hypothesis 7:** The impact of fear on offline shopping is determined by adherence to health protocols.

**Hypothesis 8:** The impact of perceived risk on offline shopping is determined by adherence to health protocols.

#### 3.2. Data

The target population in this study is the Indonesian population 18 years or more. In an erratic condition threatened by the COVID-19 crisis, online data collection is preferable. Indonesia did not implement a lockdown but implemented large-scale social restrictions, where vital sectors such as groceries are still open even with time restrictions and limitation on number of customers. Purposive sampling is applied in this study. To avoid samples that are closely related to researchers, such as family, relatives, or friends, the researcher selects the sample in sequence. First, the researcher set 25 agents who were not close friends with the author, with varying occupational and educational backgrounds. The researcher asked them to redistribute the questionnaire to three respondents. Then, the three respondents were asked to redistribute the questionnaire, each to 3 other respondents, and continued spreading until the end of the data collection period. Of the 531 respondents who accessed and filled out the questionnaire, only 504 are complete. The results of data collection on 504 respondents show quite varied characteristics (See Table 1).

**Table 1: The Respondent's Characteristics**

Variables	Percentage	Variables	Percentage
<b>Gender</b>		<b>Education</b>	
Male	52.6	Higher	81.2
Female	47.4	Secondary	18.1
<b>Age (Years)</b>		Lower	0.2
18-20	10.5	<b>Income Level Per Month</b>	
21-25	22.4	<2 Million IDR	18.7
26-30	14.9	2,000,000 – 4,000,000 IDR	10.1
31-40	26.6	4,000,001 - 7,000,000 IDR	15.3
41-50	11.7	7,000,001 - 10,000,000 IDR	21.4
51 and above	13.9	10,000,001 - 15,000,000 IDR	13.5
<b>Marital Status</b>		15,000,001 - 25,000,000 IDR	11.7
Married	53.6	Above Rp. 25 million IDR	11.1
Single	46.4	<b>Occupation</b>	
<b>Religion</b>		Working in private company	40.7
Muslim	78.6	Civil servants / government-owned company / Police / Military	25.8
Protestant	10.2	Students	20
Catholic	6.2	Self-employed	9.5
Hindu	0.8	do not work	4.8
Buddist	3.8		
Other	0.2		

### 3.3. Variable measurements

The measurements of all variables in this research are adapted from previous studies (see Table 2). The consumer behavior used in this study is the intensity of offline shopping for the last three months. A five-point Likert scale ranging from "1 = very strongly disagree" to "5 very strongly agree" is used to measure Perceived Risk (PR), Attitude (ATT), and Subjective Norm (SN). The Fear and Health Protocol (HP) is measured using a five-point semantic differential scale ranging from "1 = never" to "5 always", while offline shopping (Shop) is measured using a five-point scale ranging from "1 = never to" 5 = often".

### 3.4. Analysis method

Before creating a regression model, factor analysis is carried out on the unobserved variables. Hair et al. (2014) state that Factor Analysis in principle can be used to group correlated variables or statement items by minimizing the correlation between groups. Also, Factor Analysis will provide a score that can be used to create a regression model. The result of factor analysis shows that several statement items (Fear3, PR1, PR2, ATT1, ATT3, SN4, Shop1, and Shop3) have a factor loading (FL) less than 0.5, which means those statement items are not valid (Hair et al., 2014), and must be reduced. The data processing results are presented in Table 2, which shows that KMO, MSA, Bartlett's test, and Eigenvalue indicate the sample's adequacy for factor analysis, as suggested by Hair et al. (2019).

**Table 2:** Results of Factor Analysis

Construct/Source	Item	Statements	MSA	Statistics
Health Protocol (WHO, 2020)	HP1	Wash your hands properly using soap and water or a hands-on kit	.640	KMO = .661 Bartlett's test = 253.439 Eigen Value = 1.853 Variance (%) = 61.760
	HP2	Wear a mask properly to cover the mouth and nose when in public	.650	
	HP3	Try avoiding crowds, or contacting other people	.707	
Fear (Ahorsu et al., 2020)	Fear1	I am terrified of Coronavirus-19	.702	KMO = .739 Bartlett's test = 715.595 Eigen Value = 2.581 Variance (%) = 64.514
	Fear2	Thinking about the Corona-19 virus makes me uncomfortable.	.757	
	Fear4	I fear losing my life due to coronavirus-19	.721	
	Fear5	My heart is pounding when I think about the corona-19 virus	.802	
Perceived Risk (Dipa et al., 2020)	PR3	Offline shopping makes me interact with other people which can cause me to be exposed to the corona virus	.500	KMO = .500 Bartlett's test = 230.901 Eigen Value = 1.607 Variance (%) = 80.372
	PR4	Offline shopping puts me in a crowd which can cause me to be exposed to the corona virus	.500	
Attitude (Usman et al., 2020; Pike and Ryan, 2004)	ATT2	Offline shopping is an important activity even during the Covid-19 pandemic	.726	KMO = .684 Bartlett's test = 343.945 Eigen Value = 1.989 Variance (%) = 66.285
	ATT4	Offline shopping is a fun activity even during the covid-19 pandemic	.670	
	ATT5	Offline shopping is still safe even during the covid-19 pandemic	.665	
Subjective Norm (Usman et al., 2020; Khatimah and Halim, 2016)	SN1	My family and friends prefer to shop offline even during the covid 19 pandemic	.739	KMO = .688 Bartlett's test = 388.818 Eigen Value = 2.042 Variance (%) = 68.067
	SN2	The person I often agree with his/her opinions thinks that offline shopping is necessary even during the covid 19 pandemic	.660	
	SN3	Others can influence me to shop offline still needed even during the covid 19 pandemic.	.678	
Shopping offline (Shop)	Shop2	Frequency of visiting supermarkets in the past three months	.715	KMO = .676 Bartlett's test = 316.653 Eigen Value = 1.950 Variance (%) = 64.984
	Shop4	Frequency of visiting shopping centers in the past three months	.675	
	Shop5	Frequency of visiting the mall in the past three months	.650	

After obtaining the factor analysis score, the multiple regression models with interactions is applied to test the statistical hypothesis, as follows:

Model(1):

$$\text{Shop}_i = \beta_{02} + \beta_{12} \text{ATT}_i + \beta_{22} \text{SN}_i + \beta_{32} \text{Fear}_i + \beta_{42} \text{PR}_i + \beta_{52} \text{Fear}_i * \text{HP}_i + \beta_{62} \text{PR}_i * \text{HP}_i + \varepsilon_i$$

Model(2):

$$\text{ATT}_i = \beta_{01} + \beta_{11} \text{Fear}_i + \beta_{21} \text{PR}_i + \varepsilon_{i1}$$

#### 4. Results

Model (1) produces an R2 of 0.24, which can be interpreted that the explanatory variable contributes 24% to explain variations in the intensity of offline shopping. Furthermore, using the 10% level of significance, the statistical hypothesis test results on Model (1) reveal that attitude, subjective norm, and fear significantly affect the intensity of

offline shopping (see Table 3). It can be concluded that the data support H1, H2, and H3. However, the data do not support H5, which means that PR has no significant effect on the intensity of online shopping. The results of hypothesis testing also show that the effect of PR on offline shopping is moderated by HP (data supports 8). However, HP does not moderate the impact of fear on offline shopping (data does not support H7). So it can be said that the effect of PR on the intensity of offline shopping depends on the high or low HP, but the effect of fear on the intensity of offline shopping does not depend on the HP.

**Table 3:** Results of Regression Model (1)

Variables	B	Std Error	t-statistics	p-value
Constant	.025	.042	.588	.557
HP	.006	.048	.127	.899
Fear	-.079	.041	-1.893	.059
PR	.046	.045	1.027	.305
ATT	.405	.041	9.786	.000
SN	.100	.043	2.323	.021
HP*Fear	.007	.042	.180	.857
HP*PR	-.069	.035	-1.958	.051

Model (2) produces an R2 of 0.026, which can be interpreted that fear and perceived risk contribute to 2.6% to explain variations in the intensity of offline shopping, and the rest are explained by other variables that are not taken into account in the model. Furthermore, the results of statistical tests using a significant level of 10% can be seen in Table 4. Fear and PR have a significant influence on attitudes towards offline shopping, which means the data supports H4 and H6. Thus, attitude mediates the relationship between Fear and PR with the intensity of offline shopping. These results also show that fear has a direct and indirect effect on the intensity of offline shopping, and PR only has an indirect effect on offline shopping through attitude.

**Table 4:** Results of Regression Model (2)

Variables	B	Std Error	t-statistics	p-value
Constant	.000	.044	.000	1.000
Fear	-.106	.045	-2.367	.018
PR	-.141	.045	-3.139	.002

## 5. Discussions

Attitude and the subjective norm have a significant positive effect on the intensity of offline shopping consumers for the last three months. These results indicate that attitude and subjective norms can explain behavior directly without going through intention. Fleseriu et al. (2020) stated that buying interest may not translate into actual consumption for various reasons, leading to an intention-behavior gap (Eberhardt, 2021). To avoid this, if consumers have carried out the behavior, we recommend studying the behavior rather than just intention.

Fear has a significant negative impact on the intensity of shoppers in traditional land-based retail stores, either directly or indirectly through attitude. Avoiding offline shopping is a self-protective behavior, as stated in PMT (Roger, 1975). This result is also in line with IZARD et al. (1991) that fear changes behavior and affects attitudes. Meanwhile, the results of this study also found that adherence to health protocols did not moderate the impact of fear on the intensity of offline shopping. It can be interpreted that consumers who have a high level of fear tend not to shop offline, whether they have a high or low level of compliance with health protocols. Adherence to health protocols can be viewed as a behavior to protect themselves and reduce fear, as stated by Zeelenberg et al. (2008), Paek et al. (2016),



and many more, which can encourage consumers to shop offline. However, this study reveals that the behavior to protect themselves and reduce fear is not enough to encourage consumers to shop offline.

Perceived risk has no significant effect on the intensity of offline shopping consumers. This result is not in line with that stated by Kraus and Slovic (1988) that a high-risk perception brings a high chance of attempting action to deal with the threat, and Slovic et al. (1984); and Slovic (1987) that a controllable risk perceived is viewed as less alarming. This research indicates that some consumers who perceive high risk continue to shop offline, and some consumers who perceive low risk do not shop offline. This condition may be explained by the significant negative effect of perceived risk on offline shopping when moderated by the health protocol. These results can be interpreted that in the consumer group with high adherence to the health protocol, perceived risk has a significant effect on preventing consumers from offline shopping, compared to the consumer group with low adherence to the health protocol. In the consumer group with low adherence to health protocols, there is no longer a relationship pattern between perceived risk and the intensity of offline shopping. It is why perceived risk has no significant effect on the intensity of online shopping.

Consumer compliance with health protocols is a behavior to reduce potential risk, which will encourage consumers to shop offline. However, this study revealed that consumers with the same perceived risk tend not to shop physically if they have high adherence to health protocols. In addition, although the perceived risk does not directly affect the intensity of offline shopping, this variable has an indirect effect, mediated by attitude. The regression coefficient is negative, and it can be interpreted that perceived risk plays a role in forming a negative attitude, which negatively affects the intensity of offline shopping.

## **6. Conclusions**

This study provides several conclusions: First, attitude and subjective norm have a significant influence on offline shopping behavior, and attitude is a moderating effect of fear and perceived risk on the intensity of offline shopping. The comparison of the regression coefficients between variables shows that attitude has the most significant influence on the intensity of offline shopping. Thus, it can be stated that attitude is the key to encourage the behavior. Second, fear has a direct effect on the intensity of offline shopping. Fear also has indirect effect through attitude on the intensity of offline shopping. High or low consumer compliance with health protocols does not impact the effect of fear on the intensity of offline shopping consumers. Third, the effect of perceived risk on the intensity of offline shopping depends on compliance with health protocols. Perceived risk has a significant negative effect only on the consumer group with high adherence to the health protocol. Fourth, compliance with health protocols is not enough to give consumers a sense of security to shop offline. Furthermore, it does not encourage consumers to shop offline.

### **6.1. Theoretical Implication**

In TRA (Fishbein and Ajzen, 1975), attitude and subjective norms affect behavior through intention to behave. However, our study reveals that attitude and subjective norms can directly influence behavior. Given that people do not always do what they intend to do (Sheeran and Webb, 2016), in research that focuses on intention, practitioners and decision-makers must carefully translate intention into behavior. The use of intention to behave as a basis for decision-making can result in misleading decisions. Therefore, this study suggests, if behaviors have been carried out, such as offline shopping in this study, it is best to use behaviors right away.

Even though attitude and subjective norm are the most important predictors of intention and behavior (Tucker, 2017; Paul et al., 2016; Zhou et al., 2013; Foscht et al., 2009), however, after three variables have been added, the regression model only gives a coefficient of determination (R<sup>2</sup>) value of 20.4%. It can be interpreted that the variables that are not taken into account in the model have a much higher contribution. Therefore, various other relevant variables are needed to be integrated with TRA to enhance predictive power, as stated by Mondéjar-Jiménez et al. (2016), Russell et al. (2017), and many more.

Even though complying with health protocols can be seen as an effort to protect themselves, reduce fear and potential risk, it cannot encourage consumers to shop offline and even prevent consumers from offline shopping. It shows that the actual behavior to protect themselves is carried out by consumers by avoiding offline shopping, as expressed by (Sheth, 2020). So, as long as the level of fear and perceived risk among consumers is still high, offline shopping will continue to suffer.

### **6.2. Practical Implication**

Offline shopping channels during the COVID-19 pandemic will continue to face difficulties as long as consumers have high fear and perceived risk. Based on descriptive data, the median level of fear of respondents is still relatively high, namely 3.25. These statistics indicate that offline shopping activities will not be carried out by at least 50% of consumers. Meanwhile, the level of perceived risk is higher than fear, which is 3.97. Considering that compliance in implementing health protocols is not a behavior that can reduce fear, the high median perceived risk may indicate that consumers who avoid offline shopping activities can be higher than 50%. This situation will undoubtedly be detrimental to offline retail as long as COVID-19 is still ongoing.

Consumer compliance with health protocols is a self-protection measure but not a driver to increase offline shopping activities. Only the easing of fear and perceived risk can encourage consumers to return to offline shopping. The repeated threats will cause fear to decrease (Weinreich, 1999; Fry, 1996; Schoenbachler and Whittler, 1996). Perhaps the long-standing COVID-19 pandemic can cause consumer fear to be reduced. In addition, social distancing by staying at home makes consumers bored. If these two things happen, then the need for physical shopping at retail stores will increase. All of this happened with the assumption that the COVID-19 pandemic did not worsen. If it worsens, of course, the government will not allow malls to operate.

Attitude has a crucial role in encouraging consumers to shop offline. However, consumers who have a high level of fear and perceived risk tend to have a negative attitude, which negatively affects the intensity of offline shopping. On the other hand, in the group of consumers who have a high level of adherence to health protocols, the effect of perceived risk on offline shopping is significantly negative. Some of these conditions indicate that offline shopping entrepreneurs will continue to suffer when fear and perceived risk are still high. Adherence to health protocols does not make consumers feel safe but instead has a negative attitude towards offline shopping.

### 6.3. Managerial Implication

Given the critical role of attitude in determining behavior, attitude formation must be a top priority. However, the attitude itself is determined by fear and perceived risk. Therefore, entrepreneurs of traditional land-based retail stores must reduce consumer fear and perceived risk so that they are willing to shop offline. Entrepreneurs can use the concept of shopping based on health. Under these conditions, entrepreneurs must start by building consumer trust by proving that a physical retail store is not a cluster for the spread of COVID-19. Strict and severe implementation of health protocols, such as: limiting the number of visitors, maintaining social distancing, providing places to wash hands or hand sanitizers in various places, are non-negotiable methods to build that trust. However, strict health protocols should not give the impression of a tense and rigid atmosphere but must be carried out with full hospitality.

For retail stores that sell non-essential products, they can change to essential merchandise. Stagnant and even negative economic growth has caused consumer purchasing power to decline, so consumers tend to shop for essential products or daily necessities. At the same time, it is time for retail business people to convert or complete their business into online retail. This effort is not only a way to overcome the negative impact of the COVID-19 pandemic on business, but also has become a demand of business environment. So, building online retail at this time is an effort to prepare future businesses, even though the COVID-19 pandemic has disappeared from the earth.

### 7. Limitation and Future Research

This study has several limitations, which can be used as a reference for further research. First, this research relates directly between attitude and behavior because data collection is carried out simultaneously. Further research might connect attitude-intention-behavior. Second, this study limits the statement items in the construct based on previous research. Thus, ignoring the possibility that online shopping behavior can also be influenced by whether or not other people or family member which might replace them to go shopping thus affecting the frequency of online shopping. Third, the model built in this study produces R<sup>2</sup> by 20.4%. Therefore, further research can add independent variables to increase predictive power.

### References

- Addo, P. C., Jiaming, F., Kulbo, N. B., & Liangqiang, L. (2020). COVID-19: fear appeal favoring purchase behavior towards personal protective equipment. *The Service Industries Journal*, 40(7-8), 471-490.
- Ahorsu, D. K., Lin, C-Y, Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2022). The fear of COVID-19 scale: development and initial validation. *International Journal of Mental Health and Addiction*, 20(3), 1537-1545.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211

- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52(1), 27-58.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Anderson, R. M., Heesterbeek, H., Klinkenberg, D., & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *Lancet*, 395(10228), 931 - 934.
- Aven, T., & Kristensen, V. (2005). Perspectives on risk: review and discussion of the basis for establishing a unified and holistic approach. *Reliability Engineering & System Safety*, 90(1), 1-14.
- Bauer, R. A. (1960). Consumer behavior as risk taking, in Hancock, R.S. (Ed.), *Dynamic Marketing for a Changing World. Proceedings of the 43rd Conference of the American Marketing Association*, 389-398.
- Bay, E. J., & Algase, D. L. (1999). Fear and anxiety: A simultaneous concept analysis. *Nursing Diagnosis*, 10(3), 103-111.
- Boyatzis, R. E., & Akrivou, K. (2006). The ideal self as the driver of intentional change. *Journal of Management Development*, 25(7), 624-642.
- Briggs, P. (2020). Digital retail propelled by COVID-19 quarantines. *Canada Ecommerce 2020*. Retrieved from <https://www.emarketer.com/content/canada-ecommerce-2020>.
- Ceurvels, M (2020). How CIVID-19 will affect growth and sales in Argentina, Brazil and Mexico. *America Ecommerce 2020*. Retrieved from <https://www.emarketer.com/content/latin-america-ecommerce-2020>.
- Chaplin, S. (2020). COVID-19: a brief history and treatments in development. *Prescriber May 2020*. Retrieved from <https://wchh.onlinelibrary.wiley.com/doi/10.1002/psb.1843>
- Chekima, B., Wafa, S.A., Igau, O.A., Chekima, S., & Sondoh Jr., S. L. (2016). Examining green consumerism motivational drivers: does premium price and demographics matter to green purchasing? *Journal of Cleaner Production*, 112(4), 3436-3450.
- Conchar, M.P., Zinkhan, G.M., Peters, C., & Olavarrieta, S. (2004). An integrated framework for the conceptualization of consumers' perceived-risk processing. *Journal of the Academy of Marketing Science*, 32(4), 418-436.
- Cox, D. F., & Rich, S. U. (1964). Perceived risk and consumer decision making – the case of telephone shopping. *Journal of Marketing Research*, 1(4), 32-39
- Farooq, A., Laato, S., & Islam, A. N. (2020). Impact of online information on self-isolation intention during the COVID-19 pandemic: cross-sectional study. *ournal of Medical Internet Research*, 22(5), 1-22.
- Fishbein, M., & Ajzen, I. (1975). *Beliefs, attitude, intention, and behavior: an introduction to theory and research*. Reading, MA: Addison-Wesley.
- Foscht, T., Schloffer, J., Maloles, C., & Chia, S. L. (2009). Assessing the outcomes of generation-Y customers' loyalty. *International Journal of Bank Marketing*, 27(3), 218-241.
- Fry, T. R. (1996). Advertising wearout in the Transport Accident Commission road safety campaigns. *Accident Analysis & Prevention*, 28(1), 123-129.
- Geer, J. H. (1965). The development of a scale to measure fear. *Behaviour Research and Therapy*, 3(1), 45-53.
- George, J. F. (2004). The theory of planned behaviour and internet purchasing. *Internet Research*, 14(3), 198-212.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. *Advances in Experimental Social Psychology*, 29, 61-139.
- Guagnano, G. A., Stern, P. C., & Dietz, T. (1995). Influences on attitude-behavior relationships: a natural experiment with curbside recycling. *Environment and Behavior*, 27(5), 699-718.
- Habel, J., & Klarmann, M. (2014). Customer reactions to downsizing: when and how is satisfaction affected? *Journal of the Academy of Marketing Science*, 43(6), 768-789.
- Hagger, M. S. (2019). *The reasoned action approach and the theories of reasoned action and planned behavior*, in Dunn, D.S. (Ed.), *Oxford Bibliographies in Psychology*, Oxford University Press, New York, NY.
- Hair, J. F., Hult, G.T. M., Ringle, C.M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage, Thousand Oaks.
- Hong, I., & Cha, H. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management*, 33(6), 927-939.
- Hudson, P., Hagedoorn, L. and Bubeck, P. (2020). Potential linkages between social capital, flood risk perceptions, and self-efficacy. *International Journal of Disaster Risk Science*, 11, 251-262.
- Izard, C. E. (1991). *The psychology of emotions*. New York, NY: Plenum Press.
- Janssen, M. (2018). Determinants of organic food purchases: evidence from household panel data. *Food Quality and Preference*, 68, 19-28.
- Jin, B., & Kim, J. (2003). A typology of Korean discount shoppers: shopping motives, store attributes and outcomes. *International Journal of Service Industry Management*, 14(4), 396-419.
- Kallgren, C. A., & Wood, W. (1986). Access to attitude-relevant information in memory as a determinant of attitude-behavior consistency. *Journal of Experimental Social Psychology*, 22(4), 328-338.
- Kraus, N. N., & Slovic, P. (1988). Taxonomic analysis of perceived risk: modeling individual and group perceptions within homogeneous hazard domains. *Risk Analysis*, 8(3), 435-455.
- Lee, N., & Kotler, P. (2011). *Social Marketing: Influencing Behaviors for Good*. Sage publications.
- Leppin, A., & Aro, A. R. (2009). Risk perceptions related to SARS and avian influenza: theoretical foundations of current empirical research. *International Journal of Behavioral Medicine*, 16(1), 7-29.
- Levin, A. M., Levin, I. P., & Heath, C. E. (2003). Product category dependent consumer preferences for online and offline Shopping features and their influence on multi-channel retail alliances. *Journal of Electronic Commerce Research*, 4(3), 85-93.

- Levin, A. M., Levin, I. P., & Weller, J. A. (2005). A multi-attribute analysis of preferences for online and offline shopping: differences across products, consumers, and shopping stages. *Journal of Electronic Commerce Research*, 6(4), 281–290.
- Liu, Y. C., Kuo, R. L., & Shih, S. R. (2020). COVID-19: the first documented coronavirus pandemic in history. *Biomedical Journal*, 43(4), 328-333.
- Loewenstein, G., & Lerner, J. S. (2003). The role of affect in decision making. *Handbook of affective science*, 619(642), 3-15.
- Loewenstein, G. (2000). Emotions in economic theory and economic behavior. *American Economic Review*, 90(2), 426-432.
- Lu, H. P., Hsu, C. L., & Hsu, H. Y. (2005). An empirical study of the effect of perceived risk upon intention to use online applications. *Information Management and Computer Security*, 13 (2), 106-120.
- Maddux, J. E., & R.W. Rogers. (1983). Protection motivation and self-efficacy: a revised theory of fear appeals and attitude change. *Journal of Experimental Social Psychology*, 19(5), 469–479.
- Martin, J., Mortimer, G., & Andrews, L. (2015). Re-examining online customer experience to include purchase frequency and perceived risk. *Journal of Retailing and Consumer Services*, 25(July), 81-95.
- McFarland, D. (1987). *The Oxford Companion to Animal Behaviour*. Oxford, UK: Oxford University Press.
- Mondéjar-Jiménez, J. A., Ferrari, G., Secondi, L., & Principato, L. (2016). From the table to waste: an exploratory study on behaviour towards food waste of Spanish and Italian Youths. *Journal of Cleaner Production*, 138(1), 8-18.
- Moon, J., Choe, Y., & Song, H. (2021). Determinants of consumers' online/offline shopping behaviors during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(1593), 1-15.
- Mulia, D., Usman, H., & Parwanto, N. B. (2020). The role of customer intimacy in increasing Islamic bank customer loyalty in using e-banking and m-banking. *Journal of Islamic Marketing*, 12(6), 1097-1123.
- Paek, H. J., Oh, S. H., & Hove, T. (2016). How fear-arousing news messages affect risk perceptions and intention to talk about risk. *Health Communication*, 31(9), 1051-1062.
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29(1), 123-134.
- Pavlou, P. A. (2001). Integrating trust in electronic commerce with the technology acceptance model: model development and validation. *Proceedings of the Seventh Americas Conference in Information Systems*, Boston, MA.
- Pavuluri, M. N., Henry, D., & Allen, K. (2002). Anxiety and fear: discriminant validity in the child and adolescent practitioner's perspective. *European Child & Adolescent Psychiatry*, 11(6), 273–280.
- Plutchik, R. (1984). Emotions: A general psychoevolutionary theory. *Approaches to emotion*, 1(1), 197-219.
- Rex, J., Lobo, A., & Leckie, C. (2015). Evaluating the drivers of sustainable behavioral intentions: an application and extension of the theory of planned behavior. *Journal of Nonprofit and Public Sector Marketing*, 27(3), 263-284.
- Rhian, M. (2020). Table Internet sales as a percentage of total retail sales (ratio) (%). *Office for national statistics*. Retrieved from <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/timeseries/j4mc/drsi>.
- Rimal, R. N. (2001). Perceived risk and self-efficacy as motivators: Understanding individuals' long-term use of health information. *Journal of Communication*, 51(4), 633-654.
- Rimal, R. N., & Real, K. (2003). Understanding the influence of perceived norms on behaviors. *Communication Theory*, 13(2), 184-203.
- Rogers, R.W. (1975). A protection motivation theory of fear appeals and attitude change. *The Journal of Psychology*, 91(1), 93-114.
- Rogers, R.W. (1983). *Cognitive and psychological processes in fear appeals and attitude change: a revised theory of protection motivation*. Social Psychophysiology: A Sourcebook, Guilford Press.
- Rosenstock, I. M. (1974). The health belief model and preventive health behavior. *Health Education Monographs*, 2(4), 354-386.
- Russell, S.V., Young, C. W., Unsworth, K. L., & Robinson, C. (2017). Bringing habits and emotions into food waste behaviour. *Resources, Conservation and Recycling*, 125(October), 107-114.
- Sarkar, R., & Das, Dr. S. (2017). Online shopping vs offline shopping: a comparative study. *International Journal of Scientific Research in Science and Technology*, 3(1), 424–431.
- Schoenbachler, D. D., & Whittler, T. E. (1996). Adolescent processing of social and physical threat communications. *Journal of Advertising*, 25(4), 37–54.
- Shamsi, H. R., Najafabadi, M. O., & Hosseini, S. J. (2020). Designing a three-phase pattern of organic product consumption behaviour. *Food Quality and Preference*, 79(January), 1-11.
- Sheeran, P., & Webb, T. L. (2016). The intention-behavior gap. *Social and Personality Psychology Compass*, 10(9), 503–518
- Sheeran, P. (2002). Intention-behavior relations: a conceptual and empirical review. *European Review of Social Psychology*, 12(1), 1-36.
- Sheth, J. (2020). Impact of Covid-19 on Consumer Behavior: Will the Old Habits Return or Die? *Journal of Business Research*, 117, pp.280–283.
- Slovic, P. (1987). Perception of risk. *Science*, 236(4799), 280-285.
- Slovic, P., Fischhoff, B., & Lichtenstein, S. (1984). Behavioral decision theory perspectives on risk and safety. *Acta Psychologica*, 56(1), 183–203.
- Sniehotta, F. F., Presseau, J., & Araújo-Soares, V. (2014). Time to retire the theory of planned behavior. *Health Psychology Review*, 8(1), 1-7.
- Tandon, A, Dhir, A., Kaur, P., Kushwah, S., & Salo, J. (2020). Why do people buy organic food? The moderating role of environmental concerns and trust. *Journal of Retailing and Consumer Services*, 57(November), 1-12.

- Tiwari, R., & Abraham, A. (2010). Understanding the consumer behavior towards shopping malls in raipur city. *International Journal of Management & Strategy*, 1(1), 1-14.
- Tucker, M., Jubb, C., & Yap, C. J. (2020). The theory of planned behaviour and student banking in Australia. *International Journal of Bank Marketing*, 38(1), 113-137.
- Tweneboah-Koduah, E. Y., Adams, M., & Acheampong, G. (2019). *Journal of Social Marketing*, 9 (4): 398-417.
- U.S. Bureau of the Census (2020). *E-Commerce Retail Sales as a Percent of Total Sales [ECOMPCTSA]*, FRED, Federal Reserve Bank of St. Louis. Retrieved from <https://fred.stlouisfed.org/series/ECOMPCTSA> (accessed Dec. 25, 2020).
- Usman, H., Mulia, D., Chairy, C., & Widowati, N. (2020). Integrating trust, religiosity and image into technology acceptance model: the case of the Islamic philanthropy in Indonesia. *Journal of Islamic Marketing*, 13(2), 381-409.
- von Abrams, K. (2020a). Digital Retail Prospers in the Coronavirus Era. *Germany Ecommerce 2020*. Retrieved from <https://www.emarketer.com/content/germany-ecommerce-2020>.
- von Abrams, K. (2020b). Digital Sales Soar as Total Retail Suffers. 2020. *France Ecommerce 2020*. Retrieved from <https://www.emarketer.com/content/france-ecommerce-2020>.
- Weber, E. U. (2006). Experience-based and description-based perceptions of long-term risk: Why global warming does not scare us (yet). *Climatic Change*, 77(1-2), 103-120.
- Weinreich, L. (1999). *11 steps to brand heaven*. London, England: Kogan Page.
- Witte, K. (1992). Putting the fear back into fear appeals: the extended parallel process model. *Communication Monographs*, 59(4): 329-349.
- Yuksel, A., & Yuksel, F. (2007). Shopping risk perception: effects on tourists' emotion, satisfaction and expressed loyalty intentions. *Tourism Management*, 28(3), 303-13.
- Zeelenberg, M., Nelissen, R. M., Breugelmans, S. M., & Pieters, R. (2008). On emotion specificity in decision making: Why feeling is for doing. *Judgment and Decision Making*, 3(1), 18-27.