The Factors Influencing Online Food Delivery Usage Intention on Semi-Endemic Period

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Abstract

Background: In 2021, food delivery apps users in Indonesia reached the world highest number amounting 74.4% users. The main reason is the implementation of COVID-19 health protocol in Indonesia which limits outdoor activities. However, the COVID-19 pandemic situation in Indonesia indicates that COVID-19 is in the final phase of moving towards endemic or can be called a Semi-endemic phase since Indonesia government regulations, regarding COVID-19 health protocol, are getting loose by allowing people to do outdoor activities.

Objective: This study aims to examine the relationship between the variables in Theory of Planned Behavior (TPB), which consists of; attitude, subjective norms, perceived behavioral control and trust, and perceived risk in predicting online food delivery behavioral intention during the Semi-endemic period in Indonesia.

Method: This study adopts a quantitative research which employs 303 respondents who filled out an online questionnaire about food delivery applications usage for three months starting in July 2022.

Results: Attitude, perceived behavioral control, and trust are positively and directly influencing the usage intention, while subjective norms do not. There were two risk variables, namely privacy risk and COVID-19 risk, which had a significant impact on consumers' online food delivery usage intention.

Conclusion: Based on TPB, trust, and risk, this study showed that attitude, perceived behavioral control, trust, COVID-19 risk and privacy risk are significant in influencing online food application usage intentions in Indonesia during the semi-endemic period.

Keywords: online food delivery; online food delivery usage intention; perceived risk; semi endemic; theory of planned behavior.

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1.   **Introduction**

Pandemic refers to a widespread contagious disease which occurs worldwide or over a specifically large area, which brings negative impacts on many aspects of the life of a greater population (Qiu et al., 2017). WHO stated that there are 6 phases of pandemic which are followed by post peak phase and are ended with post pandemic phase, according to the pandemic caused by influenza (World Health Organization, 2009). During the post peak phase, the spread of pandemic virus will constantly drop from the peak, which will cause surveillance in the respected country to be lowered. Post peak phase does not guarantee that a country will not undergo any additional pandemic waves. In the post pandemic phase, the spreading activity of virus will go back to normal and will be seasonal, for example influenza virus which has now become a seasonal virus.

The COVID-19 pandemic situation in Indonesia showed that COVID-19 was in the final phase of moving towards endemic. However, Indonesia's situation is yet to be categorized as endemic and would be more suitable to be called a Semi-endemic phase (Mochtar, 2022). The Semi-endemic phase resembles the post peak phase of the previous influenza virus spread, as COVID-19 pandemic virus spread was constantly dropping from the peak of the pandemic, though there is still a probability for the next COVID-19 pandemic outbreak to emerge. Government regulations regarding COVID-19 health protocol within Indonesian society are getting loose. It is shown by the absence of compulsory use of masks for outdoor activities and by the minimum requirement of COVID-19 tests (antigen and PCR) for domestic and international travel (Kementerian Kesehatan RI, 2022) despite there are still some obligatory health protocols, such as using masks in indoor areas (Azizah, 2022) which was done to keep monitoring COVID-19 pandemic spreading and to prevent additional pandemic waves.

Since the outbreak of the 2019 Novel Coronavirus (2019-nCoV), later titled by The World Health Organization (WHO) as COVID-19, people's lives have changed in many aspects (Jaja et al., 2020). COVID-19 has affected Indonesia significantly as the world's 4th largest country in the world (Djalante et al., 2020). Azanella (2020) stated that there has been a decrease in the level of mobility in Indonesia, which has decreased in amount of 37% from normal conditions. This decrease in mobility also resulted in the low amount of dine-in activity. Therefore, there is an increase in purchases using food delivery applications.

Rakuten (2020) showed that 41% of 5,664 respondents used food delivery apps during the pandemic more often. Food delivery apps users in Indonesia reached the world highest number amounting 74.4% users of all internet users (Kemp, 2021). The implementation of health protocol which limits outdooe activities contributes to the rise of food delivery apps usage.Rakuten Insight (2020) discovered that 71% of 2,303 respondents stated that the reasons for purchasing food online are due to social distancing and to minimize outdoor activities duration during COVID-19 in Indonesia.

The easing of government regulation on COVID-19 health protocol allows people in Indonesia to do outdoor activities. On the other hand, people have been accustomed to do various online activities, such as ordering food. The transition to the Semi-endemic period will again affect consumer behavior. This change in behavior and the factors affecting it are going to be investigated using the Theory of Planned Behavior (TPB) combined with Perceived Risk. This phenomenon raises a main question: How are the factors of TPB and Perceived Risk affecting online food delivery intention during the Semi-endemic period?

TPB explains that attitude, subjective norms, and perceived behavioral control has influence over behavioral intention (Ajzen, 1991). Hamid et al. (2023) in their research found that trust also acts as a factor by having significant effect on predicting behavioral intention. Poon & Tung (2022) connected behavioral intention with perceived risk, which consists of performance risk, privacy risk, financial risk, physical risk and COVID-19 risk. These 5 components are identified in affecting online purchasing habits by Featherman & Pavlou (2003) and Han & Kim (2017). This research paper explores the effect of TPB factors, perceived risk, and trust on online food delivery use in Indonesia on transition to the endemic era or is known as Semi-endemic COVID-19 period. There has been only a limited amount if not none of research that digs into the effect of factors of TPB and perceived risk on behavioral intention especially in the Semi-endemic period. Therefore, this research would contribute to the field of knowledge by combining factors in TPB with trust and perceived risk in predicting online food delivery behavioral intention during the Semi-endemic period in Indonesia.

2.   **Literature Review**

2.1.   *Online Food Delivery Usage Intention and TPB*

Mokhtaret al. (2018) defined behavioral intention as customers' experiences that they have had previously. It refers to the customer's positive experience that leads to their willingness to revisit in the future and remain loyal (E. L. Kim, 2012). Customers' utilization of online food delivery apps in ordering food and beverages worldwide has surged remarkably. This rise of popularity is supported by the fact that consumers choose and purchase from an extensive selection to fulfill their needs, whether personally or socially (Cho et al., 2019). This leads to the practice of consumers having online purchase behavior (George, 2004). Online purchase behavior can be defined as the intention of individuals to purchase products online (Chen et al., 2010) and according to Pavlou (2003), online behavioral intention is how much consumers use online stores to make a purchase of a product. To align the terms with the object of behavior study, which is the online food delivery application, this paper will address online behavioral intention as online food delivery usage intention.

Many studies in various settings have used theory of planned behavior (TPB) to predict consumer behavioral intention (De Pelsmaeker et al., 2017; Piroth et al., 2020a; Venkatesh et al., 2003) Ajzen (1991) originally explained TPB as the way intention can be used in predicting and people would behave in a certain way if they think such behavior would produce certain outcomes that align with their values. Hamid *et al.* (2023) explored the effect of food and beverage behavioral intention using TPB and the influence of trust as an additional factor. Since the spread of COVID-19, trust issues arise in food and beverage order that affect on consumer's purchase intention (Attar et al., 2021).

Additionally, perceived risk theory can also be used to explain consumer behavioral intention. Perceived risk is the expected loss of an action, which is important in determining consumer purchase intention (Schierz et al., 2010). Poon & Tung (2022) associated risk factors with purchase intention, which if the perceived risk increases, consumers' purchasing intention would be decreased. According to Zhao *et al.* (2017) and Kim & Lennon (2013), consumers would unlikely purchase products online if they perceive that online is risky. Therefore, the consumer's intention to buy online depends in accordance with the perceived risk. Poon & Tung (2022) further explain perceived risk includes several factors such as; performance risk, financial risk, physical risk, privacy risk, and COVID-19 risk.

The conceptual framework for this research was developed from two earlier studies that examined the variables influencing online food delivery usage intention. Hamid *et al.* (2023) examined the factors of online food delivery usage intention using Theory of Planned Behavior (TPB) and trust. The Theory of Planned Behavior (TPB) variables (attitude, subjective norms, and perceived behavioral control) influence online food delivery usage intention positively, which means the greater the TPB variables, the higher the online food delivery usage intention will be. Furthermore, this research also examines perceived risk factors such as performance risk, privacy risk, financial risk, physical risk, and COVID-19 risk. According to Poon & Tung (2022) research, perceived risk factors are expected to have a negative influence on online food delivery usage intention. This research follows a conceptual framework as can be seen on Figure 1.
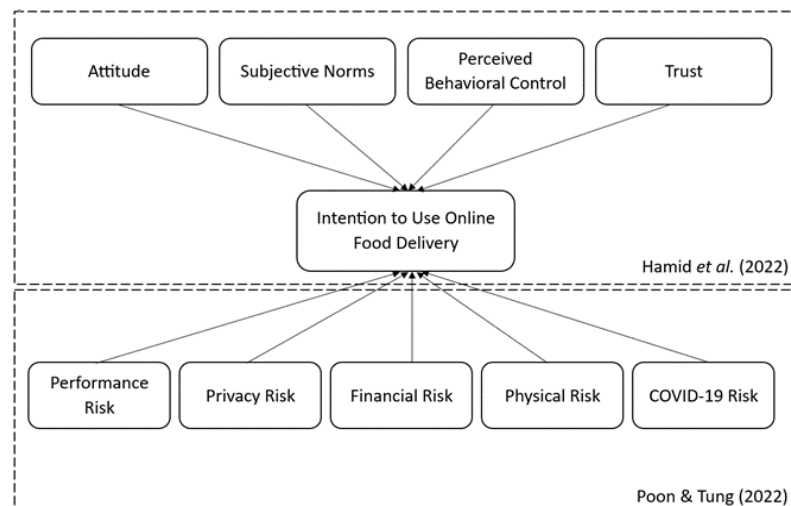
Figure 1. Conceptual Framework

2.2   *Attitude*

Attitude is a feeling a person has, whether positive or negative, towards the effect of performing a behavior (Fishbein & Ajzen, 1975). Quevedo-Silva et al. (2016) discovered that attitude is one of the essential determining factors of behavioral intention. Moreover, Widayat & Arifin (2020) found that the variable attitude significantly affects consumer's preferences and intentions in buying food. Especially during COVID-19, Güney & Sangün (2021) found that there is a significant change in food consumption behavior. The change in consumers' buying behavior is caused by social distancing and lockdown restrictions (Larios-Gómez et al., 2021; Sheth, 2020). These previous studies indicated that attitude influences consumers' behavior and COVID-19 period has altered consumer's behavior. This study further presumes that:

H1: Attitude has a positive influence on online food delivery usage intention during Semi-endemic period.

2.3   *Subjective Norms*

According to Mathieson (1991), subjective norms represent the perceived attitudes of "referent others". A "referent other" is a person or group whose beliefs are essential to the individual (Mathieson, 1991). The subjective norm (SN) is also an essential component that affects behavioral intention which is defined as "the perceived social pressure to do or not execute the action" (Ajzen, 1991). Another key definition provided by Fishbein & Ajzen (1975) is "the person's judgment that most individuals who are important to him believe he should or should not execute the conduct in issue". Poon & Tung (2022) stated that in the current setting, customers' behavioral intentions in using online food delivery applications are influenced by the perceived attitude of reference individuals such as family and friends. As a result, it is considered when using online food delivery applications (Ray et al., 2019). Previous studies showed that there is a correlation between subjective norms and behavioral intention in using online food delivery (Hansen et al., 2004; Piroth et al., 2020b). Based on these findings, this study assumes:

H2: Subjective Norms have a positive influence on online food delivery usage intention during the Semi-endemic period.

2.4   *Perceived Behavioral Control*

Perceived behavioral control (PBC) describes how much control that a person has over their behavior (Ajzen, 1991). Mathieson (1991) explained that PBC is the ability, knowledge, resources, and

opportunities a person has in using online food delivery. According to Hansen *et al.* (2004), the relationship between PBC and behavioral intention in using online food delivery apps can be seen in a positive manner based on data surveys collected from Danish and Swedish consumers. Moreover, Piroth *et al.* (2020) through questionnaire data from Southern Germany supports the positive relationship PBC and behavioral intention has in using online food delivery apps. Based on the findings, the third hypothesis of this study is:

H3: Perceived Behavioral Control has a positive influence on online food delivery usage intention during Semi-endemic period.

2.5   *Trust*

Trust is an important factor in determining behavioral intention (Schurr & Ozanne, 1985). Jarvenpaa et al. (2000) explained that customers are hesitant to make online transactions due to a lack of trust, which has been a major hurdle to the adoption of e-commerce (Keen et al., 1999). Alagoz & Hekimoglu (2012) found that trust increases people's perceptions of online food delivery. Furthermore, Nilashi et al. (2015) stated that trust has an enormous effect on the decision whether to use online shopping. Ashraf et al. (2019) and Alagoz & Hekimoglu (2012) have also analyzed the effect of trust on behavioral intention. Cho *et al.* (2019) also discovered a positive relationship trust and behavioral intention have in online food delivery. Based on the findings, the fourth hypothesis of this study is:

H4: Trust has a positive influence on online food delivery usage intention during Semi-endemic period.

2.6   *Performance Risk*

The initial issue of online food delivery is performance risk. Performance risk is the possibility of incurring losses unless the service does not function or perform as intended (Horton, 1976). Online food delivery services are most probably handled by an amateur delivery person, which would cause an unsatisfactory delivery service, as opposed to dining in a restaurant or taking out. According to Forsythe & Shi (2003), ordering goods or services online without first holding, tasting, seeing, or feeling them may raise the degree of performance risk perceived by customers. Poon & Tung (2022) stated that previous research has consistently found that online food delivery purchasers more likely receive negative experience. Based on these findings, H5 is proposed as follows:

H5: Performance risk has a negative influence on Online Food Delivery Usage Intention during Semi-endemic period.

2.7   *Privacy Risk*

Companies in the online food delivery industry may retain sensitive data through the online applications, which would increase the probability of being hacked. Fortes & Rita (2016) discovered that privacy concerns had a negative influence on trust, behavior, and online purchase intention. Privacy risks relate to the potential for a customer's personal information to be leaked or used inappropriately by a dishonest person (Forsythe & Shi, 2003). According to Poon & Tung (2022), online food delivery users have a greater chance of getting unauthorized access to information that might affect the user because all online food delivery transactions are done online. Because of this, consumers' intentions and desires to use online food delivery services might be disrupted by privacy risk. Based on this discussion,

H6 is proposed as follows:
H6: Privacy risk has a negative influence on Online food delivery usage intention during Semi-endemic period.

2.8   *Financial Risk*

According to Horton *et al*. (1976) financial risk is the probability of loss happening to consumers financially as a result of inappropriate purchase of product and services online. It includes the likelihood that options for cheaper products or services exist (Lu et al., 2005) or the product/service received by customers is not worth the price they are required to pay (Schiffman & Kanuk, 2018). Moreover, if consumers have low perception value on the online apps, they would more probably consider that the online food delivery is financially risky (L. H. Kim et al., 2005). This leads to financial risk becoming the uncertainty factor regarding the outcome of a purchase, leading to increased reluctance to engage in purchase activities (Forsythe & Shi, 2003), which means financial risk negatively affects purchase intention (S. Ali et al., 2020). Therefore, in accordance with previous studies H7 is formed as follows:

H7: Financial risk has a negative influence on Online food delivery usage intention during the Semi-endemic period.

2.9   *Physical Risk*

González Mieres et al. (2006) explained physical risk as the state of fear following buying actions of certain products to health or physical injury a person might get. In case of online food delivery, there are some forms of physical risk consumers might encounter. Consumers' geographical location would be shared real-time so that consumers would be more concerned about safety (Nguyen & Vu, 2020). Poon & Tung (2022) found that physical risk affects consumer intention to engage in online food delivery services in a negative manner and hence H8 is proposed as follows:

H8: Physical risk has a negative influence on Online food delivery usage intention during Semi-endemic period.

2.10   *COVID-19 Risk*

According to the World Health Organization (WHO), Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus and can cause most people who are infected to experience mild to moderate respiratory illness and recover without requiring special treatment. COVID-19 risk relates to the perception of contracting COVID-19. It includes the concern of contacting the delivery person which could add to a bigger chance of contracting COVID-19 (Nguyen & Vu, 2020). Ali *et al.* (2019) stated that consumers' perception about COVID-19 greatly affects their purchase decision despite the actual risk of the disease. Poon & Tung (2022) raised the concern that food delivery people would expose online food delivery customers and raise the potential of contracting COVID-19. Hence, H9 is proposed as follows:

H9: COVID-19 risk has a negative influence on online food delivery usage intention during Semi-endemic period.

3.   **Method**

3.1   *Sample / Participants*

The participants aimed for the research span for those Indonesia domiciles who had used online food delivery apps during April-July 2022. The online food delivery apps included for this research are GoFood, Grab Food, Shopee Food, Traveloka Eats, and other delivery apps that are privately owned by any restaurant brands (i.e., McDelivery Indonesia App by McDonald's, Pizza Hut Indonesia App by Pizza Hut, Domino's Pizza Indonesia App by Domino's Pizza, Burger King Indonesia App by Burger King, Bakmi GM App by Bakmi GM, KFCKU by KFC and others).

3.2   *Instrument(s)*

The questionnaire used in this study was intended to measure a total of 9 independent variables and 1 dependent variable containing a total of 38 measurement items. This study adopts previous studies' measurement items, namely 3 TPB variables which are attitude, subjective norms, and perceived behavioral control; 1 trust variable; and 1 online food delivery usage intention variable which was adapted from Hamid et al. (2023). Meanwhile, the 5 perceived risk variables were adapted from Poon & Tung (2022), which are performance risk, privacy risk, financial risk, physical risk, COVID-19 risk. Some of the measurement item sentences were partially changed without changing the meaning of the sentences. As the respondents of this questionnaire are Indonesians, the questions were translated into Indonesian. These changes were made to help respondents understand the research questions and the research objectives can be achieved. Measurement items will be listed in the appendix. This questionnaire uses a 7-point Likert type scale A, in which a scale of 1 means strongly disagree, and a scale of 7 means strongly agree. According to Diefenbach et al. (1993), the seven-point item scale emerged as the best overall and was rated as the most accurate and simplest to use by respondents.

3.3   *Data collection procedures*

An online questionnaire created through Google forms was used in this study to obtain data. The respondents of this research are customers who have experience using food delivery applications in 3 months starting from July 2022. The questionnaire access link was posted on social media networks such as WhatsApp and Instagram from July 9th, 2022 to August 4th, 2022. By the time the questionnaire was distributed until it was closed, the new daily cases of COVID in Indonesia reached its peak on July 27, 2022, which reached 6,438 new cases per day. This figure is far below the peak of COVID-19 cases in February 2022 which reached 61,488 new daily COVID-19 cases (CSSE John Hopkins University, n.d.). Beside that, a research by Southeast Strategics shows that GoFood is the main preference of consumers in Indonesia for using food delivery applications, followed by ShopeeFood in the second position, and GrabFood in the third position (Putri, 2022).

3.4   *Data analysis*

Software Statistical Package SPSS version 26 was used for analyzing the data. To see the demographic characteristics of the respondents, descriptive statistical analysis was conducted. Exploratory Factor Analysis (EFA) was used to extract factors and confirm the conceptual basis of the variables or test the validity. Furthermore, Cronbach's Alpha was used to test the reliability of the variables. And lastly, multiple regression analysis was used to test the magnitude and significance of the relationship between the independent variable and the dependent variable. A total of 333 responses were originally received, but the study only investigates 303 responses due to the absence of responses and inconsistent values on the rest of the excluded responses.

4.   **Results**

4.1.   *Demographic Profile of Respondents*

Based on the demographic analysis of the respondents, it is known that the population of respondents consists of 50.50% males and 49.50% females. Regarding age, 74.3% of participants were aged 18-27 years and 10.2% were under 18 years of age. The majority of respondents live in the Jabodetabek area (64.4%) and work as employees (50.5%) and students (34.7%). Most of the respondents were unmarried, 84.8%, while 14.5% were married. For educational background, 69.6% have undergraduate education, 15.5% are still in high school and 13.2% are postgraduates. A total of 38.9% of respondents have a monthly income below IDR 4,999,999 and 28.4% of respondents order food and drinks 6–10 times a month using a food delivery application. In addition, 87.1% of respondents use GrabFood, 85.8% use GoFood, and 44.5% use ShopeeFood for food delivery applications.A good way to organize and discuss your research findings is to restate the hypotheses – research questions, one by one, and present the data collected to test each of them. It is your decision as to what data to present in a narrative form and what to present in tables or figures. Very often, the tables and figures are accompanied by a narrative explanation. You do not need to describe in words everything presented in a numerical or visual form.

Instead, take the reader through the numerical and visual information. As the author, you should highlight the main findings, point to trends and patterns, and guide the reader through the information you present. For example, in a table displaying results from four independent-samples t tests, you can state that the second t value, which was used to test the second research hypothesis, was statistically significant at $p < .01$, and that the mean of the experimental group was eight points higher than the mean of the control group. You do not need to repeat in the narrative all the numerical information reported in the tables. Or, suppose your Results chapter includes a double-bar graph that is used to show trends and differences in the percentages of male and female teachers in preschool, elementary school, and high school. You may explain that the trend is for the percentage of male teachers to increase with grade level, whereas the percentage of female teachers decreases from preschool to high school.

4.2.   Descriptive Statistics

Descriptive Statistical Analysis was conducted to see the mean and SD of each variable. The mean value of all variables ranged from 3.291 to 6.576. Meanwhile, the standard deviation ranges from 0.624 to 1.504. Of all the variables, Perceived Behavioral Control (PBC) has the highest mean value (6.576) and Physical Risk (PR) has the lowest value (3.291). Subjective Norms (SN) shows the highest standard deviation (1.504), while Perceived Behavioral Control (PBC) shows the lowest (0.624). The lower the standard deviation value, the closer to the average value, whereas if the standard deviation value is higher, the wider the range of data variations (Lee et al., 2015).

Table 1. Descriptive Statistics

Variable Construct	Mean	SD	Variable Construct	Mean	SD
ATT	6,3791	0,75722	FR	4,0276	4,0276
SN	5,149	1,50433	PRR	1,13356	1,13356
PBC	6,5762	0,62481	PER	4,5762	4,5762
TRU	6,2757	0,7515	COR	1,30786	1,30786
PR	3,2914	1,39334	BI	4,2508	4,2508

4.3.   Measurement Model

This research combines 2 previous studies which were modified to achieve the research objectives. It is important to ensure that the measuring instrument used must be able to measure the variables accurately. Therefore, it is necessary to assess the "goodness" of the developed measure and be reasonably sure that the instrument measures the variable that it is supposed to, and measures it accurately (Bajpai & Bajpai, 2014). According to Sekaran & Bougie (2009), reliability and validity are the two main criteria for evaluating a measurement tool.

4.4.   Validity

Validity is a test of how well the developed instrument/variable can accurately measure a certain concept (Bajpai & Bajpai, 2014). One method that evaluates the construct validity of the instrument is factor analysis. The factor analysis used in this study was exploratory factor analysis (EFA). Exploratory factor analysis is a statistical approach that can be used to analyze interrelationships among a large number of variables and to explain these variables in terms of their common underlying factors (Hair et al., 2019). However, before conducting an exploratory factor analysis test, it is necessary to measure the Sampling Adequacy and Bartlett's Test. Measure of Sampling Adequacy and Bartlett's Test of Sphericity were executed to determine construct validity and to confirm that the data collected for an exploratory factor analysis were appropriate.Measure of Sampling Adequacy was used to measure the degree of intercorrelation between variables and the accuracy of exploratory factor analysis. The KMO statistic is a Measure of Sampling Adequacy, both overall and for each variable (Cerny & Kaiser, 1977; Dziuban & Shirkey, 1974; Kaiser, 1970). According to Hair et al. (2019), Measure of Sampling Adequacy index

based on KMO test, ranges from 0 to 1, with the following guidelines: 0.80 or higher, is meritorious; 0.70 or more, means tolerable; 0.60 or more, means mediocre; 0.50 or higher, means pathetic; and below 0.50, it is not acceptable. Therefore, this research uses the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy which has a criterion value above 0.50 or in the range of 0.70 to 0.80 to be considered as good.

  The next thing to be done is the Bartlett Test to determine the feasibility of exploratory factor analysis that tests the entire correlation matrix. Statistically, the significance test of Bartlett sphericity is a sig value or p-value below 0.05, which indicates that there is sufficient correlation between variables to continue (Hair et al., 2019). In this study, 10 variables had eigenvalues above 1 which corresponded to the number of variables (9 independent variables and 1 dependent variable), then the assumption test results for all measurement items were carried out simultaneously. The KMO value of this study was 0.851 and had a significant Bartlett test (p = 0.000). This indicates that the assumptions are met and the sample is adequate to carry out the factor analysis. Furthermore, in this study, the loading factor of each variable ranged from 0.686 to 0.903. Since there is only one factor that loads value below 0.7 and the majority are greater than 0.7, it can be considered as an indication of a well-defined structure (Hair et al., 2019). The KMO and Bartlett test results are shown in Table 2 and the factor loading value of each variable can be seen in Table 3.

Table 2. KMO and Sig Result

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,851
	Approx. Chi-Square	9581,593
Barlett's Test of Sphericity	df	703
	Sig.	0,000

4.5. Reliability

This research analyzes the Cronbach's Alpha coefficient to determine the internal consistency of the measurement items comprising each variable or construct in order to check the reliability. According to Sekaran & Bougie (2009), for the purpose of evaluating a concept, the consistency of the measurement items must be seen through this reliability measurement. Hair et al. (2019) and Nunnally (1978) stated that Cronbach's Alpha has a commonly accepted a lower limit of 0.7, however a lower limit of 0.6 can be utilized for exploratory study. The Cronbach's Alpha value for each variable in Table 3 is in the range of 0.726 to 0.962, exceeding the lower limit and indicating the stability and consistency of the measurement items used to assess conceptions in each of the existing variables.

Table 3. Reliability and Convergent Validity

Variable	Items	Factor Loading	Cronbach's alpha	Variable	Items	Factor Loading	Cronbach's alpha
Attitude (ATT)			0,901	*Financial Risk (FR)*			0,726
	ATT1	0,796			FR1	0,833	
	ATT2	0,789			FR2	0,835	
	ATT3	0,782			FR3	0,668	
	ATT4	0,729					
Subjective Norms (SN)			0,939	*Privacy Risk (PRR)*			0,813
	SN1	0,879			PRR1	0,807	
	SN2	0,867			PRR2	0,757	
	SN3	0,903			PRR3	0,666	
	SN4	0,884					
Perceived Behavioral Control (PBC)			0,889	*Performance Risk (PER)*			0,877
	PBC1	0,741			PER1	0,686	
	PBC2	0,704			PER2	0,864	
	PBC3	0,728			PER3	0,847	
	PBC4	0,841			PER4	0,846	
	PBC5	0,846					
Trust (TRU)			0,908	*COVID-19 Risk (COR)*			0,895
	TRU1	0,766			COR1	0,79	
	TRU2	0,794			COR2	0,865	
	TRU3	0,832			COR3	0,823	
	TRU4	0,829					
Physical Risk (PR)			0,918	*Online Food Delivery Usage Intention (BI)*			0,962
	PR1	0,841			BI1	0,877	
	PR2	0,881			BI2	0,901	
	PR3	0,888			BI3	0,891	
	PR4	0,77			BI4	0,869	

4.6. Regression Analysis

4.6.1. Multicollinearity Statistics

Prior to undertaking regression testing, it is necessary to check for the multicollinearity issues. The correlation between independent variables can affect the ability to predict independent variables. According to Hair et al. (2019), the stronger the correlation between the independent variables, the lower the independent variables' unique variance and predictive potential. Furthermore, the tolerance value and VIF are two metrics that may be used in multicollinearity testing.

Subsequently, the tolerance value is the degree of prediction accuracy of the independent variable that is not predicted by other variable independents, which in other words, reflects the independent variable's distinctive variance. Besides, the VIF value is the inverse of the tolerance value. In general, a multicollinearity issue is indicated by a tolerance value up to 0.1 or a VIF value of 10 (Hair et al., 2019). However, according to Brukya & Singh (2015), a VIF which less than 3 is seen as indication that there is no multicollinearity issue. The tolerance value in this research ranges from 0.528 to 0.913, while the range VIF value is 1.095 to 1.894, indicating that there is no multicollinearity issue (Table 4).

Table 4. Multicollinearity Statistics

Variable	Tolerance	VIF	Variable	Tolerance	VIF
ATT	0,528	1,894	FR	0,913	1,095
SN	0,717	1,395	PRR	0,592	1,689
PBC	0,659	1,518	PER	0,707	1,414
TRU	0,603	1,659	COR	0,614	1,628
PR	0,628	1,593	FR	0,913	1,095

4.6.2.   Model Fit (Adjusted R Square)

The importance of the prediction model is initially examined in order to test the fit model. The results of the ANOVA test showed that the predictive model was statistically significant with $F(9,292) = 19.312$ and significant at $p < 0.001$. According to Hair et al. (2019), the coefficient of determinants (R^2) is used to assess the accuracy of the regression's model prediction by showing the combined influence of overall variate (one or more independent variables plus intercept) in predicting the dependent variable. On theother hand, the adjusted R^2 value will be more valuable because it can represent overfitting and indicates that adding variables does not significantly improve prediction accuracy.

The results of R^2 and adjusted R^2 in this study were 0.373 and 0.354 respectively. This means that the predictor variables, namely Attitude, Subjective Norms, Perceived Behavioral Control, Trust, Physical Risk, Financial Risk, Privacy Risk, Performance Risk, COVID-19 Risk, can explain 35.4% - 37.3% of the total variance of the dependent variable, namely online food delivery usage intention. This value is relatively low where the expected coefficient of determination is higher and closer to 1, as it means that the ability to predict the dependent variable is better. The last test of the fit model is the autocorrelation assessment using the Durbin-Watson Test. In this study, the Durbin-Watson value was in 1.9831 or close to 2 where a value equal to 2 indicates no autocorrelation in the model (Bhukya & Singh, 2015).

4.6.3.   Parameter Estimates and Hypothesis Testing

There are 9 independent variables hypothesized as H1, H2, H3, H4, which have a positive relationship to the dependent variable of online purchase intention and H5, H6, H7, H8, H9 which have a negative relationship to the dependent variable of online purchase intention. To see how much influence the independent variable has on the dependent variable, it is described by the standard coefficient value (β) as an estimation parameter. Multiple regression results can be seen in Table 5.

There are 5 variables that have a sig value or p-value below 0.05, these variables consist of Attitude (β = 0.175, $p < 0.05$), Perceived Behavioral Control (β = 0.336, $p < 0.05$), Trust (= 0.184, $p < 0.05$), Privacy Risk (β = 0.162, $p < 0.05$), and COVID-19 Risk (β = -0.147, $p < 0.05$). Out of the five variables, four of them namely; Attitude, Perceived Behavioral Control, Trust, and Privacy Risk variables have a positive relationship with the BI variable, while the last variable, namely COVID-19 Risk variable, has a negative relationship with the BI variable. In addition, for a positive relationship, the Perceived Behavioral Control variable has the highest beta value, followed by the Trust variable, the Attitude variable, and the Privacy Risk variable. While the COVID-19 Risk variable has a negative relationship with a beta value of -0.147. Therefore, the first variable that positively affects BI (Behavioral Intention) is the PBC (Perceived Behavioral Control) variable, then the second is the TRU (Trust) variable, the third is ATT (Attitude), and the fourth is the PRR (Privacy Risk) variable. The COR variable has a negative effect on BI, this shows that the higher the risk of COVID, the lower BI will use online food delivery services.

Table 5. Hypothesis testing

Relationship	Sig	Std Betta	t-value	Result
H1 : ATT --> BI	0,006	0,175	2,742	Supported
H2 : SN --> BI	0,453	-0,041	-0,751	Not Supported
H3 : PBC --> BI	0,000	0,336	5,878	Supported
H4: TRU --> BI	0,002	0,184	3,082	Supported
H5 : PR --> BI	0,182	0,078	1,338	Not Supported
H6 : FR --> BI	0,057	-0,093	-1,909	Not Supported
H7 : PRR --> BI	0,008	0,162	2,687	Supported
H8 : PER --> BI	0,752	-0,017	-0,317	Not Supported
H9: COR --> BI	0,014	-0,147	-2,481	Supported

5.   Discussion

Based on TPB and trust, this study discovered that attitude, perceived behavioral control and trust are affecting behavioral intention to order food using online food delivery significantly, while subjective norms are found to be insignificant. This is confirmed by previous study (Hamid et al., 2023; Mainardes et al., 2020), even though the result has changed to some extent due to the difference in the state of the pandemic.

Perceived behavioral control (PBC) is discovered to be the strongest factor and has a significant positive effect on behavioral intention in using online food delivery during the Semi-endemic period. This contradicts the findings by Hamid et al. (2023) that PBC is neither significant nor positive to the behavioral intention. Bouarar et al. (2021) also stated that PBC did not have a significant impact on behavioral intentions, but subjective norms and COVID-19 factors had more impact on behavioral intentions using online food delivery services. Nonetheless, the positive relationship between PBC and the behavioral intention was evident in other research in other sectors (Esfandiar et al., 2019; Herrero Crespo & Rodríguez del Bosque, 2008; Yadav & Pathak, 2017) indicating that the more customer believe in their ability to control their behavior, the greater their behavioral intent, which in this case, would be using online food delivery during the Semi-endemic period.

The second strongest variable is Trust, which showed that consumers still have relatively high concerns with COVID-19 while using online food delivery. Trust is revealed to have a positive effect on behavioral intention in using online food delivery during the Semi-endemic period. This implies that consumers' willingness to use online food delivery services is influenced by their level of trust in online merchants and food delivery services. This finding is consistent with previous studies (Bouarar et al., 2021; Hamid et al., 2023).

Attitude was on the third position of the predictors of behavioral intention. Attitude affects the intention to use online food delivery during the Semi-endemic positively and this confirms results from previous studies (Hamid et al., 2023; Mainardes et al., 2020). Subjective norms are neither significant nor positive to the online food delivery usage intention. This indicates that consumers who have influencers in their lives (such as family, friends, and peers) do not significantly influence the consumer's decision to use online food delivery services and follow through on these intentions. This result is inconsistent with the findings of Hamid et al. (2023) and Bouarar et al. (2021) where subjective norms were found to be the third strongest variable of behavioral intention.This result is inconsistent with the findings of Hamid et al. (2023) where subjective norms were found to be the third strongest variable of behavioral intention. However, the result is consistent with the findings of Mainardes et al. (2020) and Duncan et al. (2015) that subjective norms do not appear to influence behavioral intention. Subjective norms showed no significance towards behavioral intention due to the socio-demographics characteristics of the respondent being used in the study as a statistical resource. Similarly, this study also considers the socio-demographics characteristics that lead to the same result, which is the opinion of others that have an insignificant influence on the behavioral intention in using online food delivery during the Semi-endemic period (Mainardes et al., 2020).

This study has also explored the effect of perceived risk that influences consumers' online food delivery behavioral intention during the Semi-endemic period in Indonesia. There were two risk variables, namely Privacy Risk and COVID-19 Risk, which had a significant impact on consumers' online food delivery behavioral intention. COVID-19 risk has a negative effect on the use of food delivery applications, but interestingly Privacy Risk has a positive effect on the use of food delivery applications. This shows that the higher the privacy risk, the higher the online food delivery usage intention. Therefore, the result is inconsistent with previous research from Poon & Tung (2022). However, Gurung et al. (2006) stated that although the perception of risk does not directly affect trust, but with a high level of trust, consumers will tend to override the privacy risk factor. This statement is in line with the findings in this study that Trust is a significant variable and has a positive effect on online behavior intention. In addition, according to Hidayanto et al. (2012) young Indonesians aged 20-25 years, who are the majority of respondents in this study, are the type of consumers who tend to be impulsive or have an urge based on satisfaction or desire consciously or unconsciously, so that although they are aware of the privacy risk but the level of trust in providing personal data and information to online service providers and use food delivery applications remains high.

On the other hand, COVID-19 risk has a negative influence on the use of food delivery applications. This is in accordance with previous research from Poon & Tung (2022). Even though the COVID-19 pandemic has decreased and has begun to enter the Semi-endemic phase (Mochtar, 2022), it turns out that the majority of respondents still pay attention to the COVID-19 factor in using food delivery applications. The higher the risk of contracting COVID-19 due to interacting with food delivery couriers, the lower online food delivery usage intention.

6.   **Conclusions**

The main purpose of this study is to analyze the factors in TPB with trust and perceived risk that influence consumers' online food delivery behavioral intention during the Semi-endemic period in Indonesia. Attitude, perceived behavioral control, and trust influence behavioral intention has a positive direct effect on behavioral intention. Subjective norms were not found to have any effect. The results of this study also showed that two risk variables were significant, which are COVID-19 risk and privacy risk. COVID-19 risk has a negative influence on the use of food delivery applications. On the contrary to previous findings, privacy risk has a positive influence on the use of food delivery applications, though this might be affected by the level of trust that the respondents had to online service providers.

The current research has several limitations that can be used to guide future research. First, this research still does not represent the research findings for Indonesia as a whole because only a small percentage of other regions outside Java island were represented as the sample of this study. If this research model were tested in bigger areas, the findings could be different and provide the reader with a broader view of online behavioral intention during the Semi-endemic period. Furthermore, the respondents for this research mostly aged between 18 to 27 years old showing a limitation on broader perspective in using online food delivery during the Semi-endemic period. In preparing for future research, respondents with wider range age groups are suggested to obtain diverse results and show intergenerational. If this research were tested in a wider range age group, there is a possibility that the result could differ since people with different age groups have different views on online food delivery. Lastly, this research and previous studies had only analyzed the factors in TPB and perceived risk that influence online behavioral intention. Therefore, future studies can focus on conducting research on offline behavioral intention during the Semi-endemic and compare the findings with current results to gain another perspective.

This research has several practical implications, specifically for online food delivery services. Based on the findings of this research, online food delivery providers can improve their application to be more personalized, user friendly, and easy to use for all inter-generational customers. Moreover, online food delivery providers can keep improving the services in terms of timeliness (delivery time) and by giving loyalty points of rewards to consumers every time they use the services. Online food delivery also can improve their security system and most importantly convey this information to customers, so that customers can be sure that using a food delivery application does not spread customer personal data or information. Lastly, COVID-19 is still a risk for customers to use online food delivery especially during the Semi-endemic phase. Improving hygiene during the cooking and food packaging process, as well as courier safety from the COVID-19 virus, must be maintained so that the food delivery process, especially when interacting with customers, can run safely. But most importantly, online food delivery

providers must be able to communicate the COVID-19 protocol policies that they apply to their consumers.

   Particularly, this research presents two major contributions. The first contribution is that the research is conducted during the semi-endemic period, which is the final phase of COVID-19 Pandemic in Indonesia and the second contribution is that consumers still think that COVID-19 is a risk that prevents them from buying food, so they will choose to use an online food delivery for safety reasons.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Alagoz, S. M., & Hekimoglu, H. (2012). A Study on Tam: Analysis of Customer Attitudes in Online Food Ordering System. *Procedia - Social and Behavioral Sciences*, *62*, 1138–1143. https://doi.org/10.1016/J.SBSPRO.2012.09.195Ali, F., Harris, K. J., & Ryu, K. (2019). Consumers' return intentions towards a restaurant with foodborne illness outbreaks: Differences across restaurant type and consumers' dining frequency. *Food Control*, *98*, 424–430. https://doi.org/10.1016/j.foodcont.2018.12.001

Ali, S., Khalid, N., Javed, H. M. U., & Islam, D. Md. Z. (2020). Consumer Adoption of Online Food Delivery Ordering (OFDO) Services in Pakistan: The Impact of the COVID-19 Pandemic Situation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 10. https://doi.org/10.3390/joitmc7010010

Ashraf, M. A., Joarder, M. H. R., & Ratan, S. R. A. (2019). Consumers' anti-consumption behavior toward organic food purchase: an analysis using SEM. *British Food Journal*, *121*(1), 104–122. https://doi.org/10.1108/BFJ-02-2018-0072

Attar, R. W., Shanmugam, M., & Hajli, N. (2021). Investigating the antecedents of e-commerce satisfaction in social commerce context. *British Food Journal*, *123*(3), 849–868. https://doi.org/10.1108/BFJ-08-2020-0755

Azanella, L. A. (2020, May 22). *Google Analisis Mobilitas Masyarakat Selama Pandemi Covid-19, Ini Hasilnya...* https://www.kompas.com/tren/read/2020/05/22/181500765/google-analisis-mobilitas-masyarakat-selama-pandemi-covid-19-ini-hasilnya-?page=all

Azizah, K. N. (2022). *Warga +62! Tidak Semua dapat Kelonggaran Copot Masker, Catat Ketentuannya*. Detik.Com. https://health.detik.com/berita-detikhealth/d-6086224/warga-62-tidak-semua-dapat-kelonggaran-copot-masker-catat-ketentuannya

Bajpai, R., & Bajpai, S. (2014). Goodness of Measurement: Reliability and Validity. *International Journal of Medical Science and Public Health*, *3*(2), 112. https://doi.org/10.5455/ijmsph.2013.191120133

Bouarar, A. C., Mouloudj, S., & Mouloudj, K. (2021). Extending the theory of planned behavior to explain intention to use online food delivery services in the context of COVID -19 pandemic. *Advances in Global Services and Retail Management*, *2*, 1–16. https://doi.org/10.5038/9781955833035

Cerny, B. A., & Kaiser, H. F. (1977). A Study Of A Measure Of Sampling Adequacy For Factor-Analytic Correlation Matrices. *Multivariate Behavioral Research*, *12*(1), 43–47. https://doi.org/10.1207/s15327906mbr1201_3

Chen, C., Huang, J., & Hsiao, Y. (2010). Knowledge management and innovativeness. *International Journal of Manpower*, *31*(8), 848–870. https://doi.org/10.1108/01437721011088548

Cho, M., Bonn, M. A., & Li, J. (Justin). (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, *77*, 108–116. https://doi.org/10.1016/j.ijhm.2018.06.019

CSSE John Hopkins University. (n.d.). COVID-19 Data Repository. In *John Hopkins University*. John Hopkins University.

De Pelsmaeker, S., Schouteten, J. J., Gellynck, X., Delbaere, C., De Clercq, N., Hegyi, A., Kuti, T., Depypere, F., & Dewettinck, K. (2017). Do anticipated emotions influence behavioural intention and behaviour to consume filled chocolates? *British Food Journal*, *119*(9), 1983–1998. https://doi.org/10.1108/BFJ-01-2016-0006

Diefenbach, M. A., Weinstein, N. D., & O'Reilly, J. (1993). Scales for assessing perceptions of health hazard susceptibility. *Health Education Research*, *8*(2), 181–192. https://doi.org/10.1093/her/8.2.181

Djalante, R., Lassa, J., Setiamarga, D., Sudjatma, A., Indrawan, M., Haryanto, B., Mahfud, C., Sinapoy, M. S., Djalante, S., Rafliana, I., Gunawan, L. A., Surtiari, G. A. K., & Warsilah, H. (2020). Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. *Progress in Disaster Science*, *6*, 100091. https://doi.org/10.1016/J.PDISAS.2020. 100091

Duncan, C., Muc, L., & Heck, C. (2015). Impact of Using Physiotherapy Self-Referral in the Medical–Surgical Neurological Intensive Care Unit. *Physiotherapy Canada*, *67*(1), 39–45. https://doi.org/10.3138/ptc.2013-69

Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin*, *81*(6), 358–361. https://doi.org/10.1037/h0036316

Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019). Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research*, *94*, 172–182. https://doi.org/10.1016/j.jbusres.2017.10.045

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International Journal of Human-Computer Studies*, *59*(4), 451–474. https://doi.org/10.1016/S1071-5819(03)00111-3

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: an introduction to theory and research. *Philosophy and Rhethoric*, *10*(2), 177–188.

Forsythe, S. M., & Shi, B. (2003). Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research*, *56*(11), 867–875. https://doi.org/10.1016/S0148-2963(01)00273-9

Fortes, N., & Rita, P. (2016). Privacy concerns and online purchasing behaviour: Towards an integrated model. *European Research on Management and Business Economics*, *22*(3), 167–176. https://doi.org/10.1016/J.IEDEEN.2016.04.002

George, J. F. (2004). The theory of planned behavior and Internet purchasing. *Internet Research*, *14*(3), 198–212. https://doi.org/10.1108/10662240410542634

González Mieres, C., María Díaz Martín, A., & Trespalacios Gutiérrez, J. A. (2006). Antecedents of the difference in perceived risk between store brands and national brands. *European Journal of Marketing*, *40*(1/2), 61–82. https://doi.org/10.1108/03090560610637310

Güney, O. I., & Sangün, L. (2021). How COVID-19 affects individuals' food consumption behaviour: a consumer survey on attitudes and habits in Turkey. *British Food Journal*, *123*(7), 2307–2320. https://doi.org/10.1108/BFJ-10-2020-0949

Gurung, A., Robert, L., Luo, R., & Raja, M. K. (2006). *Empirical investigation of the relationship of privacy, security and trust with behavioral intention to transact in e-commerce*. The University of Texas.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hamid, S., Azhar, M., & Sujood. (2023). Behavioral intention to order food and beverage items using e-commerce during COVID-19: an integration of theory of planned behavior (TPB) with trust. *British Food Journal*, *125*(1), 112–131. https://doi.org/10.1108/BFJ-03-2021-0338

Han, M. C., & Kim, Y. (2017). Why Consumers Hesitate to Shop Online: Perceived Risk and Product Involvement on Taobao.com. *Journal of Promotion Management*, *23*(1), 24–44. https://doi.org/10.1080/10496491.2016.1251530

Hansen, T., Jensen, J. M., & Solgaard, H. S. (2004). Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behavior. *International Journal of Information Management*, *24*(6), 539–550. https://doi.org/10.1016/J.IJINFOMGT.2004.08.004

Herrero Crespo, Á., & Rodríguez del Bosque, I. (2008). The effect of innovativeness on the adoption of B2C e-commerce: A model based on the Theory of Planned Behaviour. *Computers in Human Behavior*, *24*(6), 2830–2847. https://doi.org/10.1016/J.CHB.2008.04.008

Hidayanto, A. N., Saifulhaq, H., & Handayani, P. W. (2012). Do consumers really care on risks in online shopping? An analysis from Indonesian online consumers. *2012 IEEE International Conference on Management of Innovation & Technology (ICMIT)*, 331–336. https://doi.org/10.1109/ICMIT.2012.6225827

Horton, R. L. (1976). The structure of perceived risk: Some further progress. *Journal of the Academy of Marketing Science*, *4*(4), 694–706. https://doi.org/10.1007/BF02729830

Jaja, I. F., Anyanwu, M. U., & Iwu Jaja, C.-J. (2020). Social distancing: how religion, culture and burial ceremony undermine the effort to curb COVID-19 in South Africa. *Emerging Microbes & Infections*, *9*(1), 1077–1079. https://doi.org/10.1080/22221751.2020.1769501

Jarvenpaa, S. L., Tractinsky, N., & Vitale, M. (2000). Consumer trust in an Internet Store. *INFORMATION TECHNOLOGY AND MANAGEMENT*, *1*(1/2), 45–71. https://doi.org/10.1023/A:1019104520776

Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, *35*(4), 401–415. https://doi.org/10.1007/BF02291817

Keen, P., Ballance, G., Chan, S., & Schrump, S. (1999). *Electronic Commerce Relationships: Trust by Design*. Prentice Hall.

Kementrian Kesehatan RI. (2022, May 17). *Transisi Pandemi ke Endemi: Diperbolehkan Tidak Memakai Masker di Ruang Terbuka*. SehatNegriku. https://sehatnegriku.kemkes.go.id/baca/rilis-media/20220517/0739878/transisi-pandemi-ke-endemi-diperbolehkan-tidak-memakai-masker-di-ruang-terbuka/

Kemp, S. (2021, January 27). *Digital 2021: the latest insights into the "state of digital."* We Are Social. https://wearesocial.com/uk/blog/2021/01/digital-2021-the-latest-insights-into-the-state-of-digital/

Kim, E. L. (2012). *Understanding Hotel Re-Patronage Intention: Application of Customer Equity* [Doctoral Dissertation]. Purdue University.

Kim, J., & Lennon, S. J. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention. *Journal of Research in Interactive Marketing*, *7*(1), 33–56. https://doi.org/10.1108/17505931311316734

Kim, L. H., Kim, D. J., & Leong, J. K. (2005). The Effect of Perceived Risk on Purchase Intention in Purchasing Airline Tickets Online. *Journal of Hospitality & Leisure Marketing*, *13*(2), 33–53. https://doi.org/10.1300/J150v13n02_04

Larios-Gómez, E., Fischer, L., Peñalosa, M., & Ortega-Vivanco, M. (2021). Purchase behavior in COVID-19: A cross study in Mexico, Colombia, and Ecuador. *Heliyon*, *7*(3), e06468. https://doi.org/10.1016/J.HELIYON.2021.E06468

Lee, D. K., In, J., & Lee, S. (2015). Standard deviation and standard error of the mean. *Korean Journal of Anesthesiology*, *68*(3), 220. https://doi.org/10.4097/kjae.2015.68.3.220

Lu, H., Hsu, C., & Hsu, H. (2005). An empirical study of the effect of perceived risk upon intention to use online applications. *Information Management & Computer Security*, *13*(2), 106–120. https://doi.org/10.1108/09685220510589299

Mainardes, E. W., de Souza, I. M., & Correia, R. D. (2020). Antecedents and consequents of consumers not adopting e-commerce. *Journal of Retailing and Consumer Services*, *55*, 102138. https://doi.org/10.1016/J.JRETCONSER.2020.102138

Mathieson, K. (1991). Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior. *Information Systems Research*, *2*(3), 173–191. https://doi.org/10.1287/isre.2.3.173

Mochtar, I. (2022, March 30). *Transitioning to a semi-endemic – not endemic – phase*. The Jakarta Post. https://www.thejakartapost.com/paper/2022/03/29/transitioning-to-a-semi-endemic-not-endemic-phase.htmlMokhtar, R., Othoman, Z., Arsat, A., & Bakhtiar, M. I. (2018). Brand equity and customer behavioural intention: a case of food truck business. Journal of Tourism, Hospitality and Culinary Arts, 9(2), 561–570.

Nguyen, T. H. D., & Vu, D. C. (2020). Food Delivery Service During Social Distancing: Proactively Preventing or Potentially Spreading Coronavirus Disease–2019? *Disaster Medicine and Public Health Preparedness*, *14*(3), e9–e10. https://doi.org/10.1017/dmp.2020.135

Nilashi, M., Ibrahim, O., Reza Mirabi, V., Ebrahimi, L., & Zare, M. (2015). The role of Security, Design and Content factors on customer trust in mobile commerce. *Journal of Retailing and Consumer Services*, *26*, 57–69. https://doi.org/10.1016/J.JRETCONSER.2015.05.002

Nunnally, J. C. (1978). *Psychometric Theory*. McGraw-Hill Book Company.

Pavlou, P. A. (2003). Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of Electronic Commerce*, *7*(3), 101–134. https://doi.org/10.1080/10864415.2003.11044275

Piroth, P., Ritter, M. S., & Rueger-Muck, E. (2020a). Online grocery shopping adoption: do personality traits matter? *British Food Journal*, *122*(3), 957–975. https://doi.org/10.1108/BFJ-08-2019-0631

Piroth, P., Ritter, M. S., & Rueger-Muck, E. (2020b). Online grocery shopping adoption: do personality traits matter? *British Food Journal*, *122*(3), 957–975. https://doi.org/10.1108/BFJ-08-2019-0631

Poon, W. C., & Tung, S. E. H. (2022). The rise of online food delivery culture during the COVID-19 pandemic: an analysis of intention and its associated risk. *European Journal of Management and Business Economics*. https://doi.org/10.1108/EJMBE-04-2021-0128

Putri, D. B. (2022, June 15). *Food Delivery Services Remains High In The Post-pandemic Period*. Voi.Id. https://voi.id/en/technology/179469/research-shows-demand-for-online-food-delivery-services-remains-high-in-the-post-pandemic-period

Qiu, W., Rutherford, S., Mao, A., & Chu, C. (2017). The Pandemic and its Impacts. *Health, Culture and Society*, *9*, 1–11. https://doi.org/10.5195/HCS.2017.221

Quevedo-Silva, F., Freire, O., Lima-Filho, D. de O., Brandão, M. M., Isabella, G., & Moreira, L. B. (2016). Intentions to purchase food through the internet: developing and testing a model. *British Food Journal*, *118*(3), 572–587. https://doi.org/10.1108/BFJ-09-2015-0305

Rakuten Insight. (2020). *Behavioral change of food delivery apps usage during COVID-19 pandemic in Indonesia as of June 2020*. Statista. Behavioral change of food delivery apps usage during COVID-19 pandemic in Indonesia as of June 2020

Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, *51*, 221–230. https://doi.org/10.1016/J.JRETCONSER.2019.05.025

Schierz, P. G., Schilke, O., & Wirtz, B. W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic Commerce Research and Applications*, *9*(3), 209–216. https://doi.org/10.1016/J.ELERAP.2009.07.005

Schiffman, L. G., & Kanuk, L. L. (2018). *Consumer Behavior* (8th ed.). Prentice Hall International.

Schurr, P. H., & Ozanne, J. L. (1985). Influences on Exchange Processes: Buyers' Preconceptions of a Seller's Trustworthiness and Bargaining Toughness. *Journal of Consumer Research*, *11*(4), 939. https://doi.org/10.1086/209028

Sekaran, U., & Bougie, R. (2009). *Research Methods for Business: A Skill-Building Approach*. John Wiley.

Sheth, J. (2020). Impact of Covid-19 on consumer behavior: Will the old habits return or die? *Journal of Business Research*, *117*, 280–283. https://doi.org/10.1016/J.JBUSRES.2020.05.059

Venkatesh, Morris, Davis, & Davis. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, *27*(3), 425. https://doi.org/10.2307/30036540

Widayat, & Arifin, Z. (2020). Attitude and behavior on daily food purchasing decisions in the time of COVID-19: a case study of Indonesia consumers. *Jurnal Inovasi Ekonomi*, *5*(2), 37–44.

World Health Organization. (2009). Pandemic influenza preparedness and response: a WHO guidance document. In *World Health Organization*. World Health Organization.

Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, *134*, 114–122. https://doi.org/10.1016/j.ecolecon.2016.12.019

Zhao, X., Deng, S., & Zhou, Y. (2017). The impact of reference effects on online purchase intention of agricultural products. *Internet Research*, *27*(2), 233–255. https://doi.org/10.1108/IntR-03-2016-0082