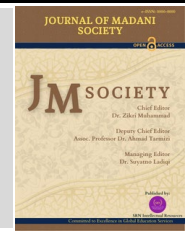




# Journal of Madani Society

Journal homepage: <https://journal.srintellectual.com/index.php/jmsc>



Original Article

## The Effect of Trust, Perceived Risk and E-Service Quality on the Intention to Purchase of E-Commerce Consumers in Indonesia

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**Citations:** Salim, M., Hayu, R.S., Agustintia, D., Annisa, R., & Daulay, M.Y.I., (2023). The Effect of Trust, Perceived Risk and E-Service Quality on the Intention to Purchase of E-Commerce Consumers in Indonesia. *Journal of Madani Society*, 2(1), 53-66.

**Academic Editor:** Zaliha Binti Zainuddin.

Received: 12 December 2022

Accepted: 6 April 2023

Published: 30 April 2023

**Abstract:** This study investigates empirically the effect of trust, perceived risk and e-service quality on the intention to purchase of online shop's customers in Indonesia. This research is a type of descriptive research with a quantitative approach. The type of data used is primary data obtained through the distribution of questionnaires. Respondents of this study were online consumers in Indonesia which were taken by accidental sampling technique as many as 333 peoples. The data analysis method used descriptive analysis and partial least square (PLS) analysis. Based on field research, the results obtained are: (i) Trust has a positive and significant effect on intention to purchase of online shop consumer; (ii) Perceived risk has a positive and significant effect on intention to purchase of online shop consumers; and (iii) E-service quality has a positive and significant effect on the intention to purchase of online shop consumers. The implications of the research are the importance of trust aspects, risk perception and quality of electronic services to online transactions. It is expected that e-commerce vendors can provide a comprehensive guarantee that sellers who join their vendors can be trusted, transactions made safe and comfortable and services provided quality.

**Keywords:** trust; perceived risk; e-service quality; purchase intention



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### 1. Introduction

The Internet significantly affects many human interactions; it forms how people share information and creates new business behaviors. The number of internet users continues to increase and the opportunities for online shopping also continue to grow (Tsao & Tseng, 2011). Nowadays, the main drivers of e-commerce remain and include the idea of building trust while managing perceived purchase risk. Online purchases can be risky simply because people don't know each other and can't physically inspect goods or meet service providers. Infarction provided for online transactions may be unsafe and worried about their personal data that may reduce online purchasing decisions (D'Alessandro et al., 2012). Some consumers perceive e-commerce as a risky and expensive way to buy, and others see the advantages of e-commerce as the ease of finding information and comparing products and prices. In the online environment, in

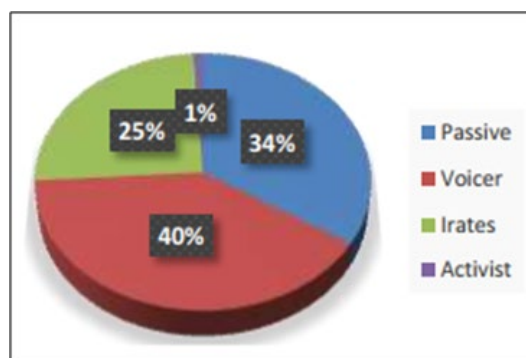
contrast to the physical environment, with greater risk and lower trust, there is difficulty in evaluating a product or service because there is no visual indication (San Martín & Camarero, 2009). People still have certain concerns to stay away from the new shopping patterns, people feel risky about online shopping than traditional shopping malls. People prefer not to shop online mostly due to risk problems (Hong & Yi, 2012). Although sellers have tried to convince consumers of their efforts, there are still complaints submitted by online customers in various industries as summarized by Alfansi, (2012) below.

**Table 1.** Online Customer Complaints in Various Industries

No.	Industry	No. of Complaints
1	Banking	675
2	Telecommunication	174
3	Internet Provider and Pay TV	125
4	Retail	109
5	Airline	93
6	Public Service	79
7	Mobile phone	78
8	Electronic Products	76
9	Insurance	69
10	Restaurants and Fast Food	68
11	PLN and PDAM	61
12	Automotive	57
13	Apartments and Housing	52
14	Transport and Taxi	51
15	Entertainment	37
16	Hospitals and Health Services	31
17	Courier and Post	29
18	Leasing and Other Financial Services	25
19	Shopping center	22
20	Hotel	11
21	Education	8
22	Other Services	56

Source : Alfansi (2012) and Lizar Alfansi & Atmaja (2009)

Table 1 displays online customer complaints in various industries. The complaints submitted by consumers (customers) through public action amounted to about 1,986 from observations for 223 days, with an average number of complaints as many as 9 complaints reported (Alfansi, 2012). Not only local-scale companies, but companies with national and international reputations also receive criticism and complaints from customers. In line with Alfansi (2012) , the results of research by Aisyiyah et al., (2019) shows that specifically for online shopping consumers, there are four types of complaint behavior, namely passive, voicer, irate and activist. From the results of mapping complaints, 40% of online shop consumers take public action as a form of voicer (protest) to sellers or service providers, followed by consumers who passive by 34%, irates by 25% and 1% are consumers who make complaints through activists , namely using certain institutions to complain.



**Figure 1.** Distribution of Consumers by Type of Complaint Behavior on Consumer Online Shopping

Source: Aisyiyah et al. (2019)

In the retail industry, especially in online retail, consumers will be interested in continuing transactions if they believe that the available system is really safe and does not disappoint. Therefore, trust is the main driving factor in the continuity and progress of online business (Karami et al., 2012). The existence of a digital platform that supports the growth of the digital economy in Indonesia has a difference in determining business strategies. This thing of course requires an in-depth analysis and mapping of who is the largest e-commerce market leader based on the model of the 5 pillars of digital economic power according to UNCTAD or the United Nations Conference on Trade & Development, namely in terms of marketplace, social networking, payment systems, and video sharing, and search engines (Putri & Zakaria, 2020). E-commerce in Indonesia is a big player seen from the number of followers (followers) social media as shown in Table 2. From this data, there is an explanation of e-commerce in Indonesia which is included in the 20 largest e-commerce until July 2020. There are several things that determine the list when viewed based on the performance of the website which is divided into several performances, namely Month l y Visitor, Page per Visit, Bounce Rate, Total Visitor, Unique Visitor, Average Visitors, and Search Traffic (Similar web).

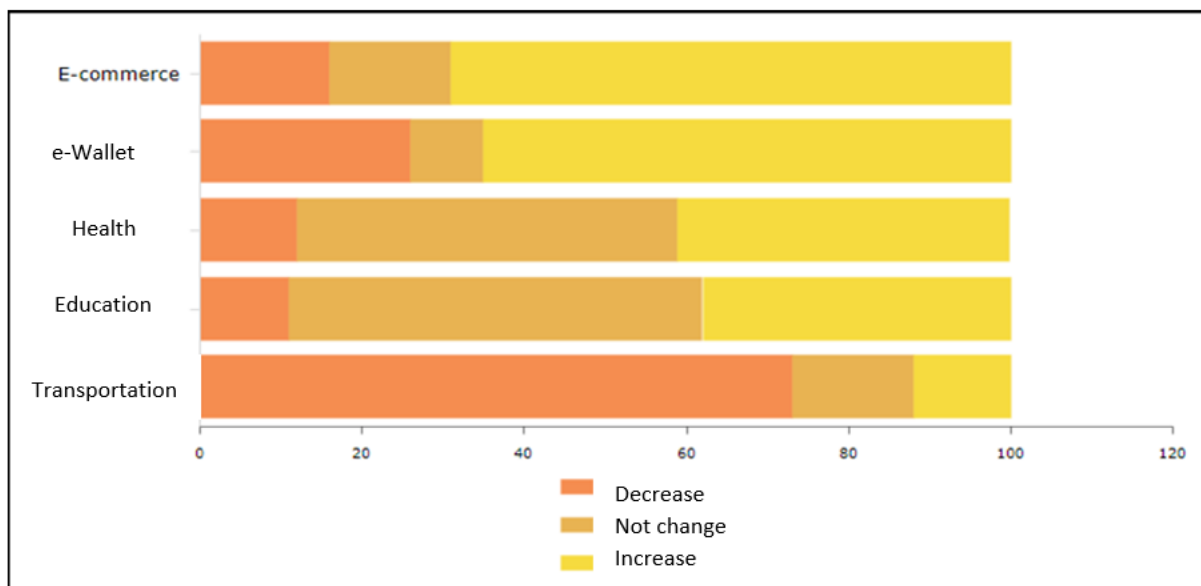
**Table 2.** Website Data on 20 E-Commerce Platforms in Indonesia July 2020 Period

E-Commerce Category	E-Commerce Website Metrics Performance						
	Monthly Visits	Page/Visits	Bounce Rate	Total Visits	Unique Visits	Average Visits	Search Traffic
Shopee	96.460.000	6.91	0,4076	289.400.000	31.480.000	00:07:38	31.270.000
Tokopedia	86.410.000	6.10	0,4143	259.200.000	28.030.000	00:07:12	31.710.000
Bukalapak	32.760.000	4.08	0,4753	98.290.000	13.890.000	00:06:12	13.890.000
Lazada	22.220.000	5.27	0,4861	66.660.000	9.293.000	00:07:11	5.890.000
Blibli	18.340.000	3.27	0,5855	55.040.000	9.606.000	00:04:23	4.071.000
JD.ID	9.080.000	2.54	0,6972	27.240.000	5.346.000	00:02:07	1.112.000
Orani	3.907.000	2.50	0,687	11.720.000	2.847.000	00:01:46	427.227
Bhinneka	3.486.000	2.13	0,7565	10.450.000	2.388.000	00:01:29	1.163.000
Zalora	2.324.000	6.26	0,4835	6.973.000	989.318	00:06:17	866.940
Sociolla	2.096.000	3.82	0,5801	6.289.000	1.179.000	00:03:24	535.097
Matahari	1.214.000	2.52	0,5876	3.643.000	647.540	00:02:26	84.923
Blanja	1.060.000	6.97	0,5012	3.182.000	593.455	00:06:10	729.856
Elevenia	933.185	1.91	0,7395	2.799.000	769.261	00:01:25	455.876
Fabelio	690.929	2.36	0,7478	2.072.000	457.202	00:01:21	89.028
Jakmall	636.011	6.85	0,3944	1.908.000	284.084	00:10:12	219.193
Laku6	584.143	2.08	0,7393	1.752.000	393.317	00:01:40	100.808
Mapemall	449.328	3.70	0,6599	1.347.000	280.615	00:02:45	144.652
Monotaro.id	410.817	2.08	0,6685	1.232.000	311.226	00:01:47	211.470
Ralali	402.597	1.69	0,7344	1.207.000	287.703	00:02:01	214.228
Mothercare	122.724	4.04	0,6605	368.172	69.028	00:04:43	28.798

Source: <https://www.Similarweb.com> (Accessed April 5, 2021)

In Indonesia, the number of internet users until the second quarter of 2020 has increased. Judging from the results of the APJII survey in collaboration with the Indonesia Survey Center (ISC), the number of internet users as of the second quarter of 2020 reached 73.7 percent of the Indonesian population. This number is equivalent to 196.7 million internet users with a population of 266.9 million. The increasing number of internet users is significantly related to the total digital platform users in Indonesia. There are several reasons for accessing the internet, namely social media, message communication, games online, and online shopping (Monica & Darma, 2022).

The outbreak of the corona virus (Covid-19) has also had an influence on people's behavior, especially on the behavior of Indonesian consumers. So far, in order to get products and services, not a few consumers are still looking for them offline by going directly to the seller's place and some others have made online purchasing activities. However, currently online shopping activities are the main alternative during the Covid-19 pandemic (Fatoni et al., 2020). This shows that online shopping become the most effective means of transaction activities during the Covid-19 outbreak. This condition shows that both business actors and consumers have carried out the government's appeal to protect themselves from Covid-19, but still carry out economic transactions. Changes in consumer behavior in the Covid-19 era also occurred in other cities in the red zone. In these conditions, the role of information technology is very large and very important, especially in e-commerce or e-purchasing activities. Based on the results of the Databooks survey by Lidwina (2020), it is known that the use of digital services in Indonesia has increased and has become an alternative in carrying out daily activities during the Covid-19 pandemic. The following Figure 2. illustrates the use of digital services in Indonesia during the Covid-19 Pandemic.



**Figure 2.** Use of Digital Services in Indonesia during the Covid-19 Pandemic

Source: Lidwina (2020) accessed by 24 January 2022

Figure 2. above shows that the use of several services in Indonesia has increased during the Covid-19 pandemic, one of which is e-commerce. Around 69% of consumers use this service more often to buy their daily needs. The use of digital wallets also increased by 65%, as a means of purchasing transactions. Furthermore, digital services in the health and education sectors have increased by 41% and 38%, respectively. Health services are widely used for consultations related to the corona virus, while Education services are to accompany studying at home (Lidwina, 2020). The behavior of accepting new technologies has become one of the most important fields in the field of software engineering. Many theories and models have been proposed over the years to explain the behavior of individuals using technology (Lizar Alfansi & Daulay, 2021). The various theories and models put forward are similar in structure but differ in their explanations for behavior and use. That is, the best theory must be comprehensive and complex in explaining its behavior and use (Momani & Jamous, 2017). Theory of Planned Behavioral (TPB) explains consumer behavior in using IT. This theory is used because online purchase intention (in this case related to behavior) is influenced by internal factors, namely trust attitudes, subjective norms, and perceptions of behavioral control as well as external factors such as perceived risk and service (Jogiyanto, 2007).

The TAM model is a model of individual acceptance of the new TSI. In TAM, ease of use and usefulness are believed to be attitudes that ultimately become behavioral intentions to use them. Furthermore, TAM has removed the attitudinal element so that beliefs about ease of use and usefulness directly form intentions (Venkatesh & Davis, 1996). In this study, the model used is the TPB and TAM models as the basis for the behavior of e-commerce consumers. Salim et al. (2019) examines the behavior of the millennial generation making online purchases. The relationship between this research and the theory of TPB and TAM is that there is a behavioral aspect that controls the consumer's desire to take purchase action. E-commerce in Indonesia is a relatively new marketing transaction channel. E-commerce contains more uncertainty and risk than conventional transactions. The potential for transaction crimes that usually occur in cyberspace such as fraud, credit card hijacking, this can happen if the security of e-commerce infrastructure is still weak. This is also a problem for consumers to make purchases online because there are more risks that consumers must be prepared to bear when making online purchases. In this regard, this study tries to examine the effect of trust, perceived risk and e-service quality on the intention to purchase e-commerce consumers in Indonesia. This study applies the theory of planned behavior (TPB) and TAM which can explain consumer attitudes and behavior, especially related to electronic/ online transactions and e-commerce.

## 2. Literature Review

Related to consumer behavior in e-commerce, a number of researchers have identified factors that can influence purchase intention, especially in online shop consumer behavior, such as Salim et al. (2019) and Fortes et al. (2017) identify the fulfillment of personal needs, level of risk and trust as factors that influence online shop behavior. Hong & Yi (2012) and San Martín & Camarero (2009) also mention the level of risk (perceived risk) as a factor that influences online shop behavior. Bianchi & Andrews (2012) identify risk and trust as antecedents of online shop behavior. The same thing was also done by Yang (2015) who provided empirical evidence that perceived risk and trust as consumer behavior in online transactions. Other researchers such as D'Alessandro et al. (2012); Gaol & Chen (2019); Hutasoit et

al. (2018) and Malik et al. (2017) also confirm the same thing, that perceived risk, trust, security, quality of service can significantly influence online shop behavior.

Trust means that consumers trust the reliability of the e-commerce platform and the seller can guarantee the security and confidentiality of consumer accounts (Shen, 2008). The factors that cause the low penetration of online shopping among internet users. The main factor is that internet users are still afraid of the rampant fraud that often occurs. The results of the APJII survey, it is known that 77.2 percent of those who do not shop online include 34.6 percent reasoning that they are afraid of fraud, 21.5 percent cannot see the goods in person, 13.8 percent consider the price of goods to be expensive. Meanwhile, the rest of internet users reasoned, among others, that they were not interested, the quality was not guaranteed, they did not know how, and it was impractical (Wibowo, 2015). The research of Kore et al., (2018) in their research shows that trust has a positive and significant effect on online purchase intentions . Geffen stated that a very important factor that can influence purchase intention which can further trigger online purchase intentions by consumers is the trust factor.

Research by Hong & Yi (2012) shows that the trust variable has a positive and significant effect on purchase intention, so that if the influence of the trust variable is strong, it will increase purchase intention. Bianchi and Andrews (2012) in their research show that there is a significant positive effect of trust and online purchase intention. Schiffman & Kanuk (2008) accepted risk is a condition of uncertainty faced by consumers if they cannot predict the consequences of their purchase intention. This definition highlights two dimensions of risk that are perceived as relevant, namely uncertainty and consequence. Gerber et al. (2014) shows that accepted risk has an impact on online buying behavior. This past online buying behavior has an impact on future online buying behavior. (Resa & Andjarwati, 2019) in their research show that there is a significant positive effect of accepted risk and purchase intention. (Hutasoit et al., 2018) shows that the accepted risk variable has a positive and significant effect on consumers' purchase intentions. Perceived risk emphasizes the notion of the risk that a person will receive when conducting online transactions. The higher perceived risk causes a person to have a higher fear when transacting online, and vice versa. Low perceived risk will make someone comfortable doing online transactions, it is undeniable that in the future they will return to do online transactions. Also, e-service quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of products and services (Santos, 2003). E-service quality is the ability of a service to deliver functional performance when shopping , purchasing , and delivery to customers through electronic media (A. Parasuraman et al., 2005) .

Yen & Lu (2008) shows that the quality of electronic services has a significant influence on loyalty intentions. Likewise with the research conducted by Lasyakka (2015) and Bardhan et al. (2010) that the quality of electronic services can lead to purchase intentions in consumers. The urgency of this research is to build a sense of trust, risk accepted, and the quality of electronic services perceived by customers on e-commerce platforms to be even better. As explained in Mauludiyahwati (2017) trust is one of the most important factors when conducting online shopping transactions . The more popular the online shopping website, the higher the buyer's trust in the online shopping website. In addition, the services provided by e-commerce are also a benchmark in determining consumer buying intentions, because through service quality they will be able to assess performance and feel satisfied or not with the services provided. Through good communication, consumers will feel comfortable from good service and reduce the perception of consumer risk in transactions. Then this will ultimately be able to influence consumers in determining purchase intentions through e-commerce platforms.

## 2.1 Purchase Intention

Schiffman & Kanuk (2008) explain that intention is one of the psychological aspects that has a considerable influence on behavioral attitudes. Intentions can also be a source of motivation that will direct someone to carry out an activity or action. Purchase intention is a psychological activity that arises because of feelings (affective) and thoughts (cognitive) towards a desired product or service. Purchase intention can be interpreted as a happy attitude towards an object that makes individuals try to get the object by paying for it with money or sacrifice (Schiffman & Kanuk, 2008). According to Simamora (2003), intention is something personal and related to attitude, individuals who are interested in an object will have the power or encouragement to carry out a series of behaviors to approach or get the object. Purchase intention is the stage of the emergence of a consumer's desire or intention to buy a product. Purchase intentions arise after consumers receive a stimulus from something they see. When consumers enter a store, that's when attention arises, interest, curiosity, even the desire to try and then want to buy the product. Based on the description above, it can be concluded that purchase intention is a concentration of individual attention on an item accompanied by feelings of pleasure for the item accompanied by feelings of pleasure for the item, so that the intention creates a desire and then a feeling arises that convinces the individual that the item has benefits. And the individual wants to own the item by buying it.

## 2.2. Trust

Internet crimes -such as account burglary (account hacking), the trust factor has become very important in the use of online transactions in e-commerce. This concept of trust means that consumers trust the reliability of the e-commerce platform and the seller can guarantee the security and confidentiality of consumer accounts (Shen, 2008). According to Gerrard & Barton Cunningham (2003), consumers doubt the trust-ability aspect of the security and privacy policy of online product and service providers. Trust has a significant influence on consumers' desire to engage in online financial transactions and the provision of confidential information (such as the confidentiality of user id and passwords, personal accounts, and others). In terms of using online transactions, most users do not fully understand the security and confidentiality risks of online transactions. Therefore, consumer trust is an important factor that encourages consumers to transact online.

## 2.3. Perceived Risk

Perceived risk is a condition of uncertainty faced by consumers if they cannot predict the consequences of their purchasing decisions (Schiffman & Kanuk, 2008). The concept of perceived risk is defined as the risk that arises from consumer perceptions of uncertainty and the consequences of losses that will be suffered on the purchase of a product (Dowling & Staelin, 1994). Perceived risk itself is an individual's subjective belief about the potential negative consequences of decisions made by consumers (Samadi & Nejadi, 2009). Another definition of perceived risk is consumer beliefs about the potential negative consequences of uncertainty in the online transaction process (Kim et al., 2008). Likewise with Demirdogen et al. (2010) which explains that perceived risk is uncertainty about the negative consequences that may arise from using a product or service. Featherman et al. (2010) and Pavlou (2003) state that perceived risk is the level of customer perception of negative results obtained from online transactions. Perceived risk also presents an individual's assessment of the possibilities associated with positive or negative outcomes of a transaction or situation (Kimery & McCord, 2002). So, from the explanation of the definition of perceived risk above, it can be concluded that perceived risk is the potential for loss or negative consequences to efforts to get the results desired by consumers in online shopping through internet media.

## 2.4. E-Service Quality

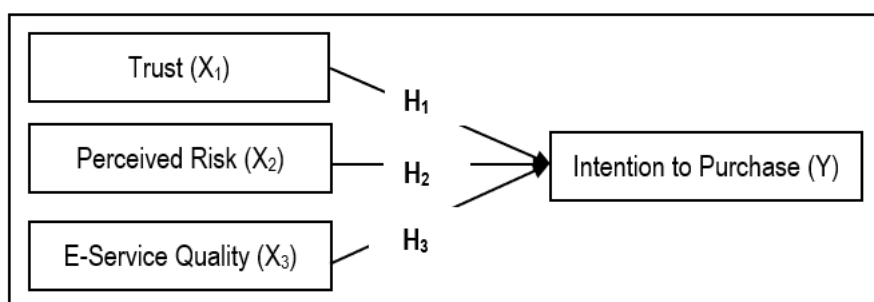
Basically, e-service quality is the development of service quality which is applied to an electronic media. E-service quality or also known as E-ServQual, is a new version of Service Quality (ServQual). E-ServQual was developed to evaluate a service provided on the Internet network. E-service quality is defined as an extension of the ability of a site to facilitate shopping, purchasing and distribution activities effectively and efficiently (Jacobs et al., 2004). E-service quality or electronic service quality is the overall perception and experience of customers from three basic levels of service, customer-oriented services, and add value for services (Khosrow-Pour, 2006). E-service includes the provision of information and support systems, transportation for services and exchange of information (Sheng & Liu, 2010). E-Service quality can simply be interpreted as the quality of electronic media services (Lasyakka, 2015).

According to Li & Suomi (2009), e-service quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of products and services. E-service quality is the ability of a service to deliver functional performance when shopping, purchasing, and delivery to customers through electronic media (Bardhan et al., 2010; Lasyakka, 2015; A. Parasuraman et al., 2005). The definitions and mentions of the quality of electronic services above are very diverse because the quality of service is very complex because it cannot be calculated (intangible), easily changed (perishable), produced and consumed simultaneously and heterogeneous (Kandulapati & Bellamkonda, 2014). Thus, it can be concluded that e-service quality is the ability of a service to provide functional performance that enables the shopping, purchasing, and delivery processes to customers through electronic media.

## 2.5. Research Framework

In this study, the author will examine the factors that can affect a person's intention to shop online. Among the many factors, the authors chose the factors of trust, perceived risk and e-service quality as the focus of the research. These factors were adapted from a number of studies among others (Bianchi & Andrews, 2012; D'Alessandro et al., 2012; Fortes et al., 2017; Gaol & Chen, 2019; Hong & Yi, 2012; Hutasoit et al., 2018; San Martin & Camarero, 2009; Sinha & Singh, 2014; von Helversen et al., 2018; Yang, 2015b). In the online shopping process, the trust factor is thought to have an influence on a person's intention to process online shopping transactions. In the trust factor, there is an aspect of ability related to the ability of sellers and online sites to provide security guarantees in the transaction process. In addition, the benevolence aspect is also a guarantee that online sellers and sites are not merely pursuing profit but also have great attention in realizing consumer satisfaction. Integrity also encourages consumer trust because there is correct information about the behavior of sellers and online sites.

Furthermore, the perceived risk factor is an important factor in explaining online purchase intentions. This is because in the process of online shopping transactions, buyers and sellers cannot meet face to face or process directly. Buyers can only find out information about the products they want to buy through the site or online shopping platform on the web provided by the seller. Therefore, the buyer cannot directly check the goods or products to be purchased. There are several risks that may occur or become fear for buyers in online transactions, such as financial risk, product risk, time risk, and delivery risk. Hereafter, the e-service factor is a factor that can also influence consumers' desire to shop online. E-service quality is the ability of a service to deliver functional performance when shopping, purchasing, and delivery to customers through electronic media. Parasuraman et al. (2005) developed the E-S-Qual scale as a measurement of the quality of electronic services with aspects of efficiency, fulfillment, system availability, and privacy. From these explanations, the framework of this research is described as follows:



**Figure 3.** Research Framework

Source : Bianchi & Andrews (2012); D'Alessandro et al. (2012); Parasuraman et al. (2005); San Martín & Camarero (2009); Yang (2015b)

The figure of the analytical framework above shows that the intention to purchase (intention to purchase) of e-commerce users is directly influenced by trust, perceived risk and e-service quality, indicated by solid arrows.

### 3. Results and Discussion

#### 3.1. Characteristic of Respondents

Research respondents are e-commerce users in Indonesia who have made transactions in the last 3 months. The research respondents used were 333 people, through an online survey using a Google form. The time span for distributing the questionnaires is for two months, namely in October - November 2021. From the results of the demographic characteristics of the respondents, an overview is obtained as summarized in Table 3.

Table 3. Demography Profile of Respondents

No.	Characteristic	Category	Frequency (Orang)	Percentage (%)
1	Sex	Male	147	44,1
		Female	186	55,9
2	Age	< 20 Years Old	45	13,5
		21 – 24 Years Old	80	24,0
		25 – 29 Years Old	138	41,4
		>30 Years Old	70	21,0
3	Occupation	Student	66	19,8
		Civil Servant	33	9,9
		Private employees	85	25,5
		Self-employed	61	18,3
		Housewife	49	14,7
		Others	39	11,7
4	Income per Month	< Rp500.00	46	13,8
		Rp500.001 – Rp1.000.000	72	21,6
		Rp1.000.001 – Rp5.000.000	154	46,2
		Rp5.000.001 – Rp10.000.000	41	12,3
		>Rp10.000.000	20	6,0
5	Online Shopping Transactions in the	< 3 times	220	66,1
		3 – 5 times	64	19,2

No.	Characteristic	Category	Frequency (Orang)	Percentage (%)
6	Last 3 Months E-Commerce Platform used	> 5 times	49	14,7
		Shopee	159	47,7
		Lazada	51	15,3
		Tokopedia	46	13,8
		Bukalapak	22	6,6
		Tokopedia, Shopee	17	5,1
		others	16	4,8
		Bukalapak, Shopee, Lazada	11	3,3
		Bukalapak, Shopee	7	2,1
		Shopee, Lazada	2	0,6
		Tokopedia, Bukalapak, Shopee, Lazada	1	0,3
		Tokopedia, Lazada	1	0,3

Table 3 shows that female consumers dominate the use of e-commerce platforms in Indonesia, as evidenced by the 333 people surveyed, 55.9 percent are women. This shows that online shopping behavior is preferred by women aged between 25-29 years (41.4%) with incomes ranging from <Rp 500,000 to >Rp 10,000,000. The age of the respondent is the age of an adult woman, so it is assumed that she has an objective thought on her decision to use e-commerce. The online stores that became popular with women were Shopee, followed by Lazada, Tokopedia, Bukalapak and etc. Furthermore, in terms of the respondent's occupation, on average already working, only 66 people (19.8%) are still students/students. Of the respondents' occupations, 85 people (25.5%) claimed to work as employees/private employees and self-employed (18.3%). This condition shows that respondents already have a certain income, so that it becomes a market share for e-commerce. In terms of income, the lowest income is less than Rp. 500 thousand and the highest is above Rp. 10 million.

However, from the income range, most respondents claimed to earn between Rp 500 thousand to Rp 1 million (51.1%) and earn between Rp 1 million to Rp 5 million (46.2%). Only a few respondents claimed to earn more than IDR 10 million per month. This condition shows that respondents already have adequate income, so that it becomes a market share for e-commerce. The highest e-commerce consumer transaction activity in Indonesia in the last 6 years is less than 3 times (66.1%). The rest did shop activities between 3-5 times in the last 3 months and more than 5 times in the last 3 months. This of course makes consumers' desire to shop again remains high. Then, if viewed from the type and number of e-commerce platforms used by respondents, the average consumer does not only use one platform, but uses two to three e-commerce platforms. This shows that consumer interest in e-commerce is very high, so they will look for and use e-commerce that does a lot of promotion and has low/zero trust and perceived risk.

### 3.2. Result of Data Analysis

This study uses the partial least square (PLS) method for statistical testing. In general, the test includes testing the measurement model (outer model) and structural model (inner model). In this study, the testing of the outer model, so the following description only discusses testing the inner model using the SmartPLS software.

#### 3.2.1. Structural Model Testing (Inner Model)

The analysis of the inner model can be done by looking at the value of the R-Square construct. The value of R-square is used to measure the level of variation of changes in the independent variables. The higher the R-Square value, the better the prediction model of the proposed research model. The R-Square value in this study can be seen in Table 4 below.

**Table 4.** R-Square Value

	R Square
Intention to Purchase	0.468878

The higher the R-Square value, the greater the exogenous construct can explain the endogenous construct so that the better the structural equation. The R-Square value for the behavioral construct of personal financial management which is known from Table 4 is obtained at 0.469. This means that the variability of the construct of intention to purchase (purchase intention) can be explained by the construct of trust (trust), perceived risk and quality of electronic services



(e-service quality) with an effect of 46.9%. The rest is explained by factors other than the three constructs, which is 53.1%.

### 3.2.2. Hypothesis Testing Results

After calculating the algorithm, the inner model or the structural model, then hypothesis testing is carried out. The significance of the estimated parameters provides very useful information about the relationship or influence between the research variables. The basis used in testing the hypothesis is the value contained in the output path coefficient resulting from iteration bootstrapping. The structural model of the PLS bootstrapping results in this study can be seen in Figure 4 as follows:

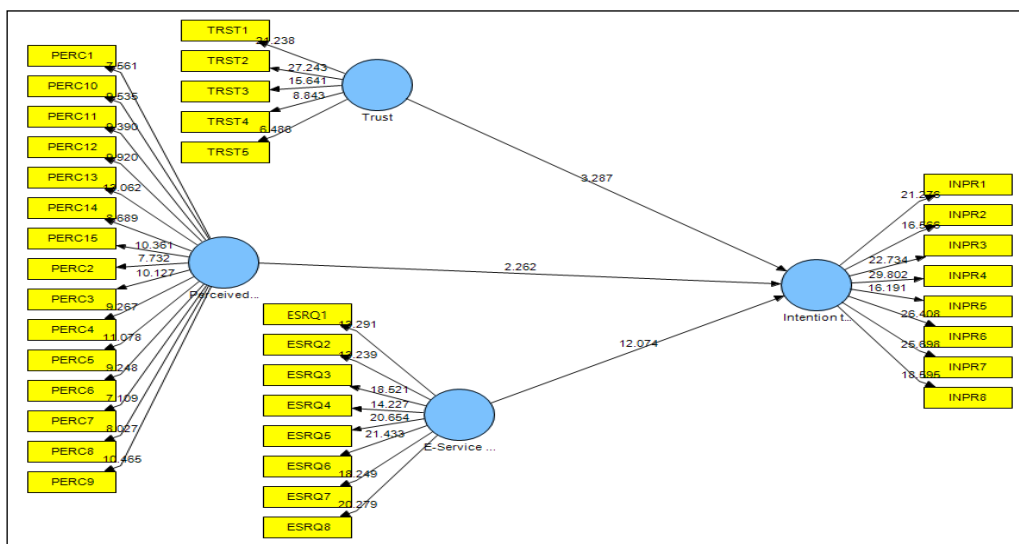


Figure 4. Structural Model Bootstrapping Results

In addition to using the R-square value, the structural model was also evaluated by t-test and the significance of the coefficients of the structural path parameters. Table 5 provides the estimated output for testing the structural model as follows:

Table 5. Structural Path Model Test Results (Mean, STDEV, T-statistics)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics ( O/STERR )
E-Service Quality -> Intention to Purchase	0.575262	0.574101	0.047645	0.047645	12.073888
Perceived Risk -> Intention to Purchase	0.098870	0.113742	0.043716	0.043716	2.261657
Trust -> Intention to Purchase	0.158401	0.161398	0.048187	0.048187	3.287200

In the SmartPLS application, statistical testing of each relationship is carried out using simulation, namely through the bootstrapping method of the sample. Testing with bootstrapping is also intended to minimize the problem of abnormal research data. The results of the bootstrapping test from the SmartPLS 2.0 M3 analysis were carried out by comparing the T-statistical value (t-value) with the t-table value at 5% alpha. This is because the SmartPLS 2.0 M3 application does not display the probability value (p-value) on the structural path. The results of testing the first hypothesis show that the effect of trust on intention to purchase is significant, where the T-statistic value is 3.287 t-table 1.960. This means that the first hypothesis is accepted. The results of testing the second hypothesis indicate that the effect of perceived risk on intention to purchase is significant, where the T-statistic value is 2.262 t-table 1.960. This means that the second hypothesis is accepted. The results of testing the third hypothesis indicate that the effect of e-service quality on intention to purchase is significant, where the T-statistic value is 12.074 t-table 1.960. This means that the third hypothesis is accepted. From the test results as shown in Table 5, it is known that all research hypotheses are accepted. This is evidenced by the value of T-statistic (t-value) t-table 1.960.

## 4. Discussion

### 4.1. The Effect of Trust on Intention to Purchase

The results of hypothesis testing indicate that the first hypothesis is proven in this study, namely that trust has a significant effect on the intention to purchase e-commerce consumers in Indonesia. Theory of Planned Behavioral (TPB) explains consumer behavior in using IT. This theory is used because online purchase intention (in this case related to behavior) is influenced by internal factors, namely trust attitudes, subjective norms, and perceptions of behavioral control as well as external factors such as perceived risk and service (Jogiyanto, 2007). The TAM model is a model of individual acceptance of the new TSI. In TAM, ease of use and usefulness are believed to be attitudes that ultimately become behavioral intentions to use them. Furthermore, TAM has removed the attitudinal element so that beliefs about ease of use and usefulness directly form intentions (Venkatesh & Davis, 1996). In this study, the model used is the TPB and TAM models as the basis for the behavior of e-commerce consumers. These two theories were also used by Salim et al. (2019) who examined the behavior of the millennial generation in making online purchases. The relationship between this research and the theory of TPB and TAM is that there is a behavioral aspect that controls the consumer's desire to take purchase action.

The influence of trust on consumers' purchase intentions at online shops is related to the characteristics of consumers themselves, namely, on average, they already have and have experienced shopping online. Of the 333 respondents there were 159 people as Shopee platform users, 51 people as Lazada users and 46 people as Tokopedia users. This shows that trust is an important factor in e-commerce activities. The trust factor on e-commerce platforms has been perceived as high by respondents, as evidenced by the average value of 3.97. Consumer trust in e-commerce is a consumer's belief that e-commerce has integrity and can be trusted and will fulfill all its obligations in conducting transactions through e-commerce applications as expected. The high consumer trust is due to the belief in e-commerce provider vendors who have good intentions to provide satisfaction to their customers and e-commerce provider vendors will fulfill what is expected by their customers.

The process of making purchase intentions is strongly influenced by consumer behavior. The process is actually a problem-solving process in order to meet consumer wants or needs. The consumer's purchase intention begins with a stimulus which is then influenced by environmental factors which then influence consumers in choosing products with certain brands (Sangadji Em, 2013). Research conducted by Bianchi & Andrews (2012) explains that trust is the commitment of a certain party to another party in conducting a transactional relationship and based on the belief that the person he trusts will fulfill all his obligations properly, as expected. Research by D'Alessandro et al. (2012) shows that consumer trust is a consumer's belief that other people have integrity and can be trusted, and the person he trusts will fulfill all his obligations in conducting transactions as expected.

### 4.2. Influence of Perceived Risk on Intention to Purchase

The results of testing the second hypothesis show that perceived risk has a significant effect on the intention to purchase e-commerce consumers in Indonesia. Perception of risk is the result that is felt when a person is not able to predict the decisions that have been made, an assessment of the subject that has a negative impact will cause concern because it contains risks that must be accepted, an uncertainty that will be felt and the consequences obtained are important dimensions in perception. risk. (Schiffman & Kanuk, 2008) accepted risk is the uncertainty faced by consumers if they cannot predict the consequences of their purchase intention. Theory of Planned Behavioral (TPB) explains consumer behavior in using IT. This theory is used because online purchase intention (in this case related to behavior) is influenced by internal factors, namely trust attitudes, subjective norms, and perceptions of behavioral control as well as external factors such as perceived risk and service (Jogiyanto, 2007). The TAM model is a model of individual acceptance of the new TSI. In TAM, ease of use and usefulness are believed to be attitudes that ultimately become behavioral intentions to use them.

Furthermore, TAM has removed the attitudinal element so that beliefs about ease of use and usefulness directly form intentions (Venkatesh & Davis, 1996). The model used in this study is the TPB and TAM models as the basis for the behavior of e-commerce consumers. These two theories were also used by Salim et al., (2019) who examined the behavior of the millennial generation in making online purchases. The relationship between this research and the theory of TPB and TAM is that there is a behavioral aspect that controls the consumer's desire to take purchase action. If the results of this study are related to the characteristics of the respondents, it is known that e-commerce respondents already know the risks that may be accepted when deciding to shop online, so they still use the e-commerce platform. Acceptable risk is the uncertainty that e-commerce consumers face when they cannot predict the consequences of their purchase intentions. This is of course realized by e-commerce consumers that the risks they accept easily occur when making purchases through e-commerce. The risk that may be experienced by e-commerce consumers is the concern that transactions through e-commerce products received do not match the picture. This happens because consumers cannot touch and see the physical goods directly, but only rely on pictures displayed on the e-commerce menu. The items described in e-commerce are sometimes not detailed, so the possibility of this discrepancy occurs.

Research conducted by Gerber et al. (2014) shows that accepted risk has an impact on online buying behavior. This past online buying behavior has an impact on future online buying behavior. Resa & Andjarwati (2019) in their research show that there is a significant positive effect of accepted risk and purchase intention. Hutasoit et al. (2018) also found that the accepted risk variable has a positive and significant effect on consumers' purchase intentions. Perceived risk emphasizes the notion of the risk that a person will receive when conducting online transactions. The higher perceived risk causes a person to have a higher fear when transacting online, and vice versa. A low perceived risk will make someone comfortable doing online transactions, it is undeniable that in the future they will return to conduct online transactions.

### 4.3. Effect of E-Service Quality on Intention to Purchase

The third hypothesis is proven to show that e-service quality has a significant effect on the intention to purchase e-commerce consumers in Indonesia. This means that the higher the e-service quality perceived by consumers at the e-commerce vendor, the higher the consumer's desire to transact online. Related to the theory of TPB and online shop consumer behavior, before making a purchase intention, it is important for consumers to know the perception of ease of use, level of risk, online service provider services, then respond in the form of attitudes which will then affect purchase intentions. Parasuraman (2002) defines service quality as the level of excellence expected and control over the level of excellence to meet customer desires. Tjiptono (2008) explains that if the service received or suggested is as expected, the perceived service quality is good and satisfactory.

If the results of this study are related to the characteristics of the respondents, it is known that e-commerce respondents have been using e-commerce platforms for a long time. The length of time using the e-commerce platform provides evidence that consumers have experienced the e-services provided by the e-commerce platform chosen by consumers. Service quality is the ability of e-commerce to provide service quality in the form of the level of excellence expected by e-commerce consumers so that they can meet their wants and needs. Some indications of the good quality of service of e-commerce vendors are proven by making it easier to find the desired product through e-commerce and the statement that it doesn't take long to access e-commerce.

If the service received exceeds customer expectations, service quality is perceived as ideal quality. On the other hand, if the service is perceived as bad. Thus, whether or not the quality of services depends on the ability of service providers to consistently meet customer expectations (Sangadji Em, 2013). According to Wyckof, service quality is the expected level of excellence and control over these advantages to fulfill customer desires (Tjiptono, 2014). Quality can be measured by parameters such as the number of customer complaints, the number of errors, the achievement of targets and so on. According to Michael Le Boeuf, businesses with low service quality on average only gain 1% of new customers and lose 2% of market share a year. On the other hand, businesses with excellent service quality, on average, get 12% additional new customers, gain 6% market share a year and are usually able to set quite high prices (Soedjas, 2014).

Andreti et al. (2013) shows that service quality influences customer purchase intentions. Also, Dwiyanto et al. (2019) shows that the service quality variable has a positive and significant (partial) effect on purchase intention. The service quality factor is very important to attract potential buyers. Weak services such as late payment confirmations make buyers feel worried and will affect purchase intentions. As buyers, of course they want to get certainty in shopping. From the research of Adjei et al. (2010), it shows that e-service performance in online shopping transactions shows that poor service quality results in a lack of interest in making transactions, because service quality greatly affects attitudes towards online shopping. With such conditions, consumers tend to be uncomfortable at service quality, such as slow response when they want to transact, unsatisfactory performance during service, providing unclear information, and less friendly service to consumers.

## 5. Conclusions

This study concludes that trust has a significant effect on intention to purchase on e-commerce consumers in Indonesia. It means that if trust is higher, it will increase the desire to do online transaction. Perceived risk has a significant effect on intention to purchase on e-commerce consumers in Indonesia. This result means that the accepted risk will affect the desire to do online transaction. The quality of electronic services (e-service quality) has a significant effect on the intention to purchase on e-commerce consumers in Indonesia. This result means that if the perceived quality of service by e-commerce consumers is higher, it will increase the desire to do online transaction. Based on the results of the study, it is known that trust, perceived risk and quality of electronic services (e-service quality) have a significant effect on the intention to purchase (intention to purchase) of e-commerce consumers in Indonesia. The results of this study have implications for the importance of aspects of trust, accepted risk and e-service quality in online transactions.

Therefore, for e-commerce vendors, they should: (a) provide a comprehensive guarantee that sellers who are members of their vendors can be trusted, both in terms of product quality to consumers who want to or shop through the e-commerce vendor by providing detailed product specifications offered. In this case, e-commerce vendors can report

sellers who are not/less trustworthy in marketing their products so that they are given both administrative and legal sanctions as stipulated in the provisions of the consumer protection law. (b) E-commerce vendors provide guarantees that transactions made by consumers with vendors are safe and comfortable transactions, so that consumers do not worry about material and time losses when transacting online, especially from the length of delivery of products purchased by consumers. If food products (perishable/stale), of course the delivery cannot be equated with non-food products that are more durable. E-commerce vendors guarantee that the services provided are of high quality. In the event of consumer complaints, vendors and sellers provide convenience, especially during product returns, such as appointing a package delivery agency to receive and return products to be returned at the vendor/seller's expense.

**Author Contributions:** Conceptualization, M.S. and R.S.H.; methodology, M.S.; software, M.S.; validation, R.S.H., D.A., R.A. and M.Y.I.D.; formal analysis, M.S.; investigation, M.S., R.S.H. and D.A.; resources, M.S.; data curation, R.S.H., D.A., R.A. and M.Y.I.D.; writing—original draft preparation, M.S. and R.S.H.; writing—review and editing, M.S., R.S.H., D.A., R.A. and M.Y.I.D.; visualization, R.A.; supervision, R.S.H., D.A., R.A.; project administration, R.S.H. and D.A.; funding acquisition, M.S. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** The author would like to thank University of Bengkulu, Indonesia, for supporting this research and publication. We would also like to thank the reviewers for their constructive comments and suggestions.

**Conflicts of Interest:** The authors declare no conflict of interest.

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