

Determinants of Actual Purchase Decisions in Carousell Indonesia: An Empirical Analysis

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Abstract. Carousell is one of the fastest-growing E-commerce sites in Southeast Asia, including Indonesia, Malaysia, and the Philippines. With many transactions occurring in Indonesia, there are differences in user behavior when deciding to transact through Carousell. Therefore, this study aims to analyze and determine the factors influencing a person's purchase decision when transacting on Carousell. This study uses a quantitative method to collect data by distributing questionnaires to 174 respondents via Google Forms; then, the data processed and analyzed using the Partial Least Square Structural Equation Modeling (PLS-SEM) method and multiple linear regression analysis. The findings reveal that Service Quality, Security, and Privacy positively impact Trust. Moreover, Trust, along with Ease of Use and Word of Mouth, positively influences Purchase Decisions. However, it is essential to note that Information Quality does not significantly affect Trust and may not be the key determinant of user's trust. Overall, this research provides valuable insights into the factors influencing purchase decisions on the Carousell platform in Indonesia. The results highlight the significance of Service Quality, Security, Privacy, Trust, Ease of Use, and Word of Mouth in shaping consumers' purchase decisions. The research results can guide Carousell and other E-commerce platforms to improve service quality, security measures, privacy protections, and trust-building strategies to drive customer trust and encourage purchase decisions.

Keywords: Purchase Decisions, Trust, E-Commerce, Perceived Quality, Indonesia

1. Introduction

In the current advanced technological era, where the advancement of internet technologies is happening, the usage of E-commerce technology is increased. This rapid increase of users using E-commerce technology is even higher after the COVID-19 Pandemic hit the world. People deem E-commerce technology helpful since people can fulfil their needs without going to the physical store to purchase what they need. As of 2022, the coordinating ministry of economy in Indonesia stated that there is 108.54 trillion Rupiah worth of transactions made across E-commerce vendors in Indonesia. Furthermore, as of 2021, the total transactions made increased by 9.4% compared to 2020 total transactions. This high user and total transaction growth proves that E-commerce is highly used.

One of the E-commerce vendors that has grown in the number of users is Carousell. Established on May 4th 2012 in Singapore, by Quek Siu Rui, Marcus Tan, and Lucas Ngoo, and registered as Carousell Pte—Ltd on January 2nd 2013. Carousell has expanded regionally to seven countries, including Australia, Hong Kong, Malaysia, the Philippines, and Indonesia. Carousell runs as an E-commerce application that allows users to buy or sell goods, ranging from new to used, with the popular products sold as used items. Carousell greatly helps users who seek specific items from another user who sells their desired items.

According to Forbes, Carousell is one of Southeast Asia's most significant and fastest-growing E-commerce and is supported by Telenor Group, Rakuten Ventures, Sequoia India and Naspers. As cited from Carousell Press, from 2012 till now, 71 million transactions of goods sold within Carousell and over 250 million listings are available across the entire application databases.

In this research, the users of the Carousell application that will be analyzed are specifically the users of Carousell, on what factors influence them to purchase items from, with the scope of this empirical research is Indonesian users (id Carousell). The reasons why the research is to be explicitly conducted from Indonesian Carousell users is, as reported by Carousell Recommerce Index 2021, within Carousell's southeast Asia market, Indonesia has the highest number of markets with the highest average of estimated unwanted items that could be sold, with an average of 57 unwanted items to be sold. The highest item category to be bought or sold is fashion (74% bought off Carousell in Indonesia are fashion related, while 85% listed off Carousell in Indonesia are fashion related). While it is stated in the same report that most of the users of Carousell Indonesia stated that value for money (62% of the users surveyed by the report) was the most popular reason for buying second-hand items, with 21% of users choosing to purchase due to environmental reasons. Within Southeast Asia, users from Indonesia stated that 70% of the buyers declared they try to buy only second-hand items as much as possible. The real-time traffic monitor, *Similarweb*, also states that Carousell in Indonesia has 31.16% traffic of visitations, just second before Taiwan with 53.77% traffic. This is why conducting this research on Indonesian users could be insightful.

We will conduct this research empirically from the consumer or buyer side of Carousell in Indonesia. The reason is that Carousell applications did not support a middleman system. A middleman system is a system where the application is the bridge between the buyers and the sellers, with the seller cannot withdraw the money until the buyer receives the goods that match the listing, from quality and condition. Most users that purchased goods within Carousell did the transaction outside Carousell, mostly by direct money transfer to the seller's account (bank account, e-Wallet account). This raises the issue of scams and fraud done by irresponsible sellers, which may lead to cybercrime cases. Sellers might put fictitious stuff with high quality for a price that does not make any sense, which may lure the consumers into purchasing, with only direct transfer payment method accepted (sellers able to define what kind of payment they accept in Carousell), then this scammer can just run away or sends another item that is totally different with the one listed. Some of the buyers that are being scammed are ranting within the Carousell app itself. Besides reporting to the customer services in Carousell, most of them used the listing features to post the chronology and proof of them being scammed by sellers during their

transaction process to raise awareness of other buyers so they don't get scammed. This reason will be the one conducted to be a research-worthy argument, since why there are still numerous amounts of buyers (as stated in the previous paragraph) that still regularly use the Carousell application despite no middleman services supported and with the scam risk happening.

Based on the explanations given earlier in the previous paragraph cited from the Carousell Recommerce Index, it states that most users that purchase the goods from the sellers see solely the products that are for sale, with no previous reports that show other factors or aspects that influence their actual Purchase Decisions in Carousell. This brings the objective of this research to discuss what other factors that can influence the user of the Carousell application in Indonesia to purchase products from the Carousell seller. The factors can be reviewed from previous studies regarding the Purchase Decisions made within other E-commerce. This research scope will cover the actual Purchase Decisions and what factors influence the buyers to make an actual purchase within Carousell. The proposed factors regarding the actual purchase of Carousell are selected regarding their relevance with actual purchase transactions made in Carousell.

This research provides academic and practical benefits. Academically, research helps increase knowledge and is a reference for subsequent research that discusses Carousell in Indonesia. While practically, this research is helpful for Carousell to continue developing E-commerce by increasing the number of transactions on the application/website. By providing user-friendly platforms and offers, Carousell can increase the chances of purchasing decisions for its users. In addition, the results of this study can be used as a reference for other e-commerce for future company development by understanding user behavior and considerations in making purchasing decisions in E-commerce.

2. Literature Review

Before proposing what factors or variables to be used in this research, it is crucial to do an in-depth literature review from previous researchers that covers similar interests in Purchase Decisions in E-commerce. Numerous journals and literature from previous researchers are gathered and examined from arguments they gave, factors they used and their research results. Sorted journals deemed helpful for this research are then used as a reference or guide for writers to write and conduct this research. Journals that share a similar scope of research interest regarding the Purchase Decisions of consumers in E-commerce are used to support the development of the research framework, and it is also used to determine what variables can be added to support the research.

The first journal was reviewed from (Napitupulu & Kartavianus, 2014), in which the journal explains six variables that have a relationship with online Purchase Decisions, namely the Information Quality, Perceived Ease of Payment, Firm Reputation, Websites Design, Benefit of Online Shopping, and Trust. This journal is empirically tested using Structural Equations Modelling (SEM) with Maximum Likelihood Estimation (MLE). This journal uses a random sample of 171 Indonesian citizens who bought goods or services from an E-commerce and used a questionnaire to collect the data. Their research proves that Ease of Payment, Trust, Benefits of Online Shopping, and Information Quality significantly affect customer online Purchase Decisions, with Trust as the most important factor among other variables being researched. While on the other hand, the remaining variables, namely the Firm's Reputation and Websites Design, do not significantly impact the Purchase Decisions, which means they do not affect the Purchase Decisions in E-commerce.

Works from (Rahmawan & Hidayat, 2020) discussed factors that influence Purchase Decisions made in one of Indonesia's largest E-commerce platforms, Tokopedia. This journal uses a specific area to conduct their research, within a city in Indonesia named Solo. This journal uses a random sample of 96 Solo citizens using Tokopedia, purposive sampling, and a questionnaire to collect the data. This journal explains four variables related to Purchase Decisions: Trust, Ease of Use, Service Quality, and Lifestyle. Their research proves that all the variables they used have a significant and positive impact on the Purchase Decisions of people in Solo to purchase goods in Tokopedia.

Works from (Ginting et al., 2022) stated the factors that influence the Purchase Decisions within one of E-commerce in Indonesia, namely Shoppe. This journal specified the respondent only from one city in Indonesia, namely Pekanbaru, with a total respondent they received for their questionnaire is 400 respondents, with a probability sampling method to collect the data. This journal covers four variables that are proposed to positively impact the Purchase Decisions (with the Purchase Decisions assumed to have significant relation towards repurchase intention). The variables are; Digital Marketing, Product Differentiation, Customer Value, and Service Quality. The result of this journal works stated that only two variables have a positive impact towards Purchase Decisions, namely Digital Marketing and Product Differentiation. The rest of the variables do not have a significant impact and does not influence the Purchase Decisions made by the user of Shoppe in Pekanbaru.

The following work reviewed came from (Sibarani, 2022), which discussed the Purchase Decisions made in E-commerce, to be seen from two proposed factors that might influence the Purchase Decisions: Advertising Promotions and Product Reviews. This research was done empirically and gathered their data through a questionnaire explicitly spread to the students of their campus' study program. A total of 53 students' insights were collected and analyzed by the researcher. This research shows that Advertising Promotions have no significant or positive effect towards Purchase Decisions, while on the other hand, Product Reviews only partially affect Purchase Decisions.

Works from (Suwaryu & Taufiqurahman, 2022) researched the Purchase Decisions within Lazada. The researcher proposed two variables that influence the Purchase Decisions made within Lazada: Sales Promotion and Trust. This journal uses non-probability sampling with an incidental sampling method in their research. Four hundred respondents' insights, from which all are Lazada E-commerce users, are collected and analyzed by the researcher for this journal. Their calculation shows that each of the variables has a partial influence towards the Purchase Decisions in Lazada, while both variables combined have a simultaneous impact towards the Purchase Decisions in Lazada.

Another work reviewed from (Rudiansyah et al., 2022) conducted research within Shoppe in Indonesia, proposing four variables that are assumed to have a significant and positive impact towards Purchase Decisions: Trust, Ease (of Use), Price, and Information Quality. These variables are deemed to influence the Purchase Decisions made by the Shoppe users. This journal uses questionnaires to gather data and by using purposive sampling to gather it. This journal gathered 81 respondents' insights that were collected and analyzed by the researcher. Their result shows that all of the variables combined have a simultaneous impact towards the Purchase Decisions in Shoppe, while only there is only three out of the four factors that have partial influence towards the Purchase Decisions in Shoppe, namely, the Ease (of Use), Price, and Information Quality. In this journal, Trust has no partial influence towards Purchase Decisions.

The following work from (Muhiban & Karina Putri, 2022) discussed factors determining the Purchase Decisions in Shoppe. This research specified that the respondents analyzed only employees of one textile company, namely PT. Gucci Ratu Textile is in one of the cities in Indonesia, namely Cimahi. They specified the employees working within the company's dyeing and finishing department. This research proposed two variables that influence the Purchase Decisions of the employees, namely Product Display and Word of Mouth. This research they are carried out by using the descriptive and associative method. For their respondents, the researcher used proportional stratified random sampling and collected 129 respondents' insights to be analyzed by the researcher. This research shows that both variables partially and simultaneously influence the Purchase Decisions in Shoppe.

The following work from (Elisabet et al., 2022) researched Purchase Decisions in E-commerce within a specific city in Indonesia, namely Binjai, with the places of research conducted to be specified within an attorney office named Binjai District Attorney, where the research is conducted for the employees. Several data-gathering methods are used in this research, including questionnaires, interviews, and direct observations. In contrast, the researcher uses total method sampling for the data

collection, with 45 respondents' insights gathered by the researcher for analysis. This research proposed two variables deemed impactful for the influence of Purchase Decisions made by the employees of the attorney's office, namely the Ease (of Use) and the Trust. This research's result shows that both variables significantly influence the Purchase Decisions made, both simultaneously and partially.

The following work from (Gunawan et al., 2019) researched what factors influence the Purchase Decisions made by E-commerce users. This research is strictly done within two regions of cities in Indonesia, namely Jakarta and Tangerang. This research proposed three impactful factors in Purchase Decisions: Brand Image, Price, and Trust. For their research, they gathered inputs from 200 respondents to fill out their questionnaire for data gathering. From 200 respondents, there is only 117 respondents' valid input that can be analyzed. Their research result shows that only one out of three variables have a significant impact: Brand Image. The Price and Trust have no significant impact on the Purchase Decisions made.

Based on previous studies, several variables influence purchase decisions when users transact online. The previous paragraphs have shown user behaviour regarding purchase decisions on various platforms such as Tokopedia, Shopee, Lazada, and others throughout Indonesia. From the results of previous research, several variables that affect purchase decisions are selected to be researched from. Previous studies have different objects. Each platform has different user habits and is also adapted to the region. The results of the literature review can be used to develop a model that will be used in this study.

3. Research Methodology

3.1. The Model

Variables proposed for this research are assumed to positively or directly impact the Purchase Decisions made by the consumers of the Carousell application in Indonesia. Several variables are proposed in order to analyze the Purchase Decisions. Previous journals and works of literature are used to support the selection of variables. Journals and literature with the same or similar variables as the one proposed earlier are to be quoted and used as a reference guide to support the research framework model and the future hypothesis development for this research.

From previous journals that have been reviewed from their research method, variables used, and their results, we agreed to select some variables deemed impactful to influence consumer's purchase decisions in Carousell and potential to be researched around. The variables that are proposed are to be displayed as a research framework, which is displayed as follows:

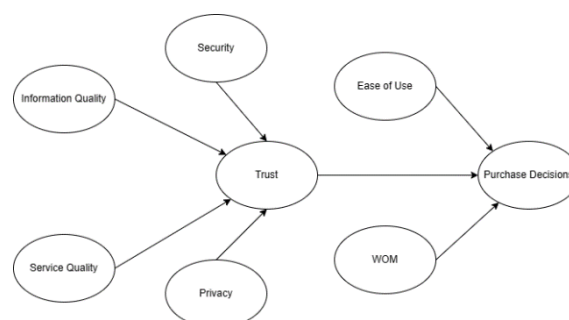


Fig. 1: Research Model

The research framework above contains proposed factors deemed impactful towards purchase decisions made by Carousell users in Indonesia. This research proposed seven variables to be researched: Information Quality, Service Quality, Privacy, Security, Trust, Ease of Use, and Word of Mouth (WOM). Except for the Ease of Use and the WOM, the proposed variables would not directly connect to the Purchase Decisions, but instead use Trust as a Medium. The variable's indicator will be proposed

after the hypothesis development.

3.2. Hypothesis Development

The hypothesis is formulated based on variables that are used in this research. The variables that are used were based on the research model that has been displayed previously. The hypothesis formulated from each variable is processed from other research and journal works containing the same variables used in this research. The variable's hypothesis is as follows:

3.2.1. Information Quality

Information Quality is a measure of value perceived by a consumer of the output produced by a website or application. Furthermore, the information an E-commerce platform provides can be divided into two parts in general. One is information about the product, and the other is about the service. The information about the products can be related to information provided for the product, ratings and feedback given by another purchaser, and related or similar products. In contrast, the service information can be related to the delivery and shipping information and the information regarding the E-commerce services (Mitchev & Nuangjamnong, 2021). In other previous works, it is stated that five components are considered essential for the information quality to be measured, namely completeness, ease of understanding, personalization, relevance, and security. These types of information are the basis of an E-commerce platform designed to support customer service and product searching (Dirgantari et al., 2020). It is stated in other previous works that the information quality, as one of the characteristics of the website or application quality, can influence the satisfaction of customers positively and significantly and for the information to satisfy the consumer's needs, it should be up to date for the products and services and easy to understand, providing the people with enough help so that they can make a reasonable choice (Hidayat et al., 2016). Based on the explanation given, it is proposed for the first variable's hypothesis:

H1: Information Quality has a positive impact towards Trust

3.2.2. Service Quality

Service quality can be described as overall consumer evaluations and judgments regarding the quality of the E-commerce platform (Lin, 2007). Other journal work stated that the quality of service provided to consumers that use the E-commerce platform could be determined as another definition of service quality, with good quality of service based on the E-commerce platform making customers feel more efficient in performing transactions in terms of time and cost. This journal also stated that the availability of information and smooth transaction is an option for customers to transact through the availability of system facilities and good internet networks as well as the guarantee of data confidentiality (Juwaini et al., 2022). Another journal stated that three components are essential for measuring service quality: assurance, empathy, and responsiveness (Dirgantari et al., 2020). Another work stated that the quality of service could be defined as a continuous service process that provides up-to-date data regarding user needs, which affects the satisfaction and expectation of the E-commerce platform quality (Hsieh, 2019). In previous works, the journal defined service quality as the customers' overall impression of a service provider's relative inferiority/superiority and services. It is often considered like the customer's attitude towards the E-commerce platform vendor (Kassim & Asiah Abdullah, 2010). Another research work stated that service quality delivers relatively unique or superior services to customer expectations. This journal described seven essential components of service quality: efficiency, reliability, Fulfilment (product guarantee), privacy, responsiveness, compensation, and contact (Rahmawan & Hidayat, 2020). Based on the explanation given, it is proposed for the first variable's hypothesis:

H2: Service Quality has a positive impact towards Trust

3.2.3. Security

Security can be referred to as the customer's perception of the secureness of their transactions; regarding payment options and the various mechanisms involved in entering, transmitting, and storing personal information as a part of data protection in online transactions, and is recognized to be a fundamental component within the transaction in E-commerce (Mitchev & Nuangjamnong, 2021). Another research shows that by having a proper security system within the E-commerce systems, the consumers can receive reassurance regarding their transaction and personal data given to the E-commerce vendor, which makes consumers perceive trust, that is helping them to complete transactions without feeling worried or scared with the risks might happen. This research works also stated four aspects that are critical within the assurance of security for consumers, namely authentication, confidentiality, integrity, and non-repudiation (Corbitt, 2008). Another journal works stated that the two factors that significantly contribute to the success of E-commerce platform vendors are the trust people place in the E-commerce itself and how secure they feel when doing business transactions within that E-commerce. This journal also highlighted that security concerns are one of the reasons people are not doing transactions within E-commerce, which means that concerns are also connected with their lack of trust in using E-commerce (Aboobucker, 2019). Then, with a higher level of perceived security, the more likely it is that a consumer will initiate a purchase on the respective E-commerce platform. Therefore, consumers will continue using the E-commerce platform they view to be highly secure. The higher the level of security a platform can offer, the higher they will decide to purchase within the respective E-commerce. Another journal work defines security as the ability of online stores to control and maintain security over data transactions, in which it also refers to earlier journal works to state that four components are considered essential for security to be determined, namely confidentiality, integrity, availability, and use of legitimacy (Rahmawan & Hidayat, 2020). Based on the explanation given, it is proposed for the first variable's hypothesis:

H3: Security has a positive impact towards Trust

3.2.4. Privacy

Privacy is essential for consumers while online shopping within the E-commerce platform, assuring the user's data is protected. At the same time, they interact with the E-commerce platform, ensuring that the transactions and personal data are secured and their privacy is protected. This is important since customer concerns include not only how this personal information is collected but also their need for control over how their information may be used is going to be used by the platform provider or any parties involved within the E-commerce vendors (Mitchev & Nuangjamnong, 2021). Another journal explains that privacy concerns consumers' feelings about how E-commerce platform vendors collect, store, and use individual data. Most consumers are concerned about how their data is being stored and used by the vendor since there are possibilities that the vendor might use their data for their benefit or immoral purposes. This leads to consumers being reluctant to provide their personal information since they fear the company will misuse it, which is an important asset to protect. The company must highly guard it because information leakage and system failure can harm the finance and productivity of the company, which leads to a loss of consumer trust change of public view towards the E-commerce platform vendors (Girsang et al., 2020). Based on the explanation given, it is proposed for the first variable's hypothesis:

H4: Privacy has a positive impact towards Trust

3.2.5. Ease of Use

Ease of use is defined as the degree to which a person believes that using technology will be free from effort. It states that ease of use should be easy to learn. Easy to understand, simple and easy to operate. This journal also stated that four components are considered essential for ease of use to be determined: ease of recognition, ease of navigation, ease of collecting information, and ease of buying

(Rahmawan & Hidayat, 2020). Another journal work, engineered from earlier works, stated that ease of use could be defined as the degree to which a person believes that using technology will be free from effort (to be seen from time and energy used). This will have an impact on the user's behavior. That is, the higher the user's perception of the ease of using the technology system, the greater the utilization level of that technology (Rudiansyah et al., 2022). Based on the explanation given, it is proposed for the first variable's hypothesis:

H5: Ease of Use has a positive impact towards Purchase Decisions

3.2.6. Word of Mouth

Word of mouth (WOM) is a form of non-formal communication made by consumers through an internet-based technology (in this journal within an E-commerce platform) used to determine the characteristics, conditions, or use of specific goods and services. This journal states that WOM spreads words using intermediary tools such as the internet or web media, which can affect purchasing decisions. One of the most common and effective forms of WOM is an online review from previous customers who purchased goods from the vendors within the E-commerce platform. This journal uses four components considered essential for determining WOM: intensity, content, positive opinion, and negative opinion (Lara & Thabrani, 2022). Another journal work stated that electronic word of mouth is a statement made by actual consumers, potential or previous consumers, whether positive or negative, regarding products or companies where this information is available to people or institutions through the internet media (Sopiyan & Kusmayadi, 2022). Another research states that WOM is the informal exchange and sharing of meaningful and timely information between buyers and sellers and is one of the characteristics that can influence consumers' decision-making process. Understanding what makes consumers voluntarily spread positive news about a product they buy is the task of business actors to improve their business performance and strategy, ultimately increasing positive responses (Muhiban & Karina Putri, 2022). Based on the explanation given, it is proposed for the first variable's hypothesis:

H6: Word of Mouth has a positive impact towards Purchase Decisions

3.2.7. Trust

Trust is a significant factor when consumers conduct online transactions since online purchases remove the distance limit that is a matter of buying and selling between buyers and sellers. The digital era that allows online transactions requires a sense of trust between buyers and sellers, so if consumers have higher trust in a product or seller, it is possible to make buying decisions (Indra et al., 2022). Another journal states that trust affects the customers' view towards the E-commerce platforms they use. By feeling trust within the E-commerce platforms, they will feel comfortable and confident when shopping at the E-commerce platform. Trust also reduces customer uncertainty, and vulnerability in the service context is not tangible when using the E-commerce platform (Juwaini et al., 2022). In other words, it defined trust as the degree of confidence or certainty in exchange options (the degree of confidence customers has in online exchanges within an E-commerce platform). The journal also stated that customer trust impacts loyalty, defined as a customer's enduring desire to maintain a valued relationship with the E-commerce platform (Azli et al., 2011). Another journal work, engineered from earlier works, stated that trust is a descriptive idea that a person has towards something. It explains that trust arises when one of the parties involved has received assurance from the other party and is willing and able to give its obligations. This journal described three essential components for determining trust: competence, integrity, honesty, and kindness (Rudiansyah et al., 2022). Based on the explanation given, it is proposed for the first variable's hypothesis:

H7: Trust has a positive impact towards Purchase Decisions

3.3. Data Collection

In collecting data in this study, the author uses a questionnaire that the indicators are engineered from previous research studies, which is revised and paraphrased according to the needs of this research. The questionnaire is divided into two parts, namely the first part and the second part. The first part of the questionnaire contains questions about the demographic profile of respondents that are used to map out the respondents, such as age, gender, occupation, educational background, and domicile. The second part of the questionnaire contains the research indicators used to indicate each variable being researched, which contains questions regarding the proposed variables. The indicators are written in concise sentences/statements to help the respondent understands the questions quickly. For this research, the author uses a Likert scale for the second part of the questionnaire, in which respondents can provide their answers based on the results of their experience who have used and transacted in the Carousell, on a scale of 1 (strongly disagree) to 5 (strongly agree). The initial questionnaire is spread by using social media and mass communication means, such as WhatsApp, Facebook, Instagram, and Line, for the respondents to complete the questionnaire.

According to the latest data from the Ministry of Home Affairs Directorate General of Population and Civil Registry, as of August 2022, the current population of Indonesian citizens reaches 275.361.267 people. The author uses this total number of Indonesian citizen as the total population that is defined as the entire group we wanted to gather insight from (Noor et al., 2022). Using the total citizen number, the error margin will be 0.15 (5% times the average Likert scale of 3). To calculate the sample size, the author uses the Slovin formula to determine how many respondents' data should be carried to match the total population number. The Slovin's formula used to calculate the population's sample size when the total number of responders was known (Briandana & Dwityas, 2019). The calculation of the minimum sample size needed for the benchmarking is as follows:

$$n = \frac{N}{1 + N e^2}$$

$$n = \frac{275.361.267}{1 + 275.361.267 (0.15)^2}$$

$$n = \frac{275.361.267}{1 + (275.361.267 \times 0,0225)}$$

$$n = \frac{275.361.267}{1 + 6.195.628,5}$$

$$n = \frac{275.361.267}{6.195.629,5}$$

$$n = 44.44 \approx 45 \text{ respondents}$$

Furthermore, to gather the respondent, the author uses a simple random sampling technique, which takes sample members from an existing population and taken randomly without limiting the differentiation in that population (Pradipta et al., 2020). The author uses simple random sampling technique to gather the respondents that acts as the sample that represents the population, we wanted information from. Simple random sampling made everyone within the population to stand an equal chance of being selected as the part of the sample (Taherdoost, 2017). Another journal defined the simple random sampling technique entails picking sample participants at random from the existing population without limiting the level of differentiation that exists within that group (Tandon et al., 2016).

The research also uses research instruments to measure data to make the results more accurate, complete, and easy to process. Table 1 provides research instrument used in this research that is distributed with the form of questionnaires to respondents, with the indicators gathered from previous research works and journals that imply similar variables:

Table 1. Research Instrument

Variable	Item	Indicator
Information Quality	IQ1	The information provided in Carousell able to be compared with other E-Commerce
	IQ2	Carousell provides complete and accurate information about the product and the company
	IQ3	The information provided by Carousell is well organized
	IQ4	Information about products is always relevant in Carousell
	IQ5	Information about products is easily understood in Carousell
Service Quality	SQ1	Carousell can always be accessed for buying and selling activities
	SQ2	All functions and services in Carousell can operate normally with no problems occurred
	SQ3	Carousell provided on time services when needed, without delay, and reliable
	SQ4	Carousell service is able to answer my technical questions and requests
Security	S1	Carousell does not provide users' personal data to third parties or others for security reasons
	S2	Carousell has information security that cannot be accessed by irresponsible parties that can harm consumers
	S3	Carousell has sufficient technical capacity to ensure that the data I send cannot be modified by hackers
	S4	Security features of Carousell is very important to build my trust when I purchase goods
	S5	My personal, financial, and transactional data are protected in Carousell
Privacy	P1	Carousell provides protection to the user's personal data and the data is also protected by applicable law
	P2	Carousell maintains, protects, and cares about the user's personal data
	P3	I look for the privacy policy when I register in Carousell
	P4	Visible privacy policy is very important to feel trust in Carousell
Trust	T1	Carousell can be trusted and is able to guarantee the trust of its users
	T2	I am sure that Carousell sellers can be held responsible
	T3	I am confident in the performance of Carousell sellers
	T4	I believe in the information provided by Carousell seller
Ease of Use	EU1	It is easy to purchase goods in Carousell
	EU2	It is easy to contact the corresponding goods seller in Carousell
	EU3	Carousell is easy to be used by anyone
	EU4	It is easy for anyone to learn how to use Carousell
Word of Mouth	WOM1	I frequently hear about a product or a seller in Carousell from people I know
	WOM2	After learning about a product or seller in Carousell, I am interested to purchase goods from that seller
	WOM3	I decided to shop in Carousell after seeing positive interactions from other shoppers with the seller
	WOM4	I decided to shop in Carousell after seeing many reviews about the goods sold in Carousell
Purchase Decisions	PD1	The quality of products offered in Carousell is assured
	PD2	The purchase decision that I take is based on the good brand image of Carousell
	PD3	Purchase decisions are taken based on goods price listed in Carousell
	PD4	Purchase decisions are based on trust of Carousell
	PD5	I purchased goods in Carousell because of the wide range of products category offered
	PD6	I purchased goods in Carousell because of interesting listing made by the sellers

3.4. Data Analysis

Based on the explanations, the research will be conducted to test factors empirically and whether they impact the actual Purchase Decisions made by the consumers within Carousell in Indonesia. The research will imply the Partial Least Square Structural Equation Modelling Method. The PLS-SEM is a statistical technique that allows researchers to simultaneously test and estimate a hypothesized relationship in each conceptual model to establish the possible correlation between dependent and independent variables, thus effectively observing the relationship between latent variables (Ilieva et al., 2022).

The PLS-SEM may estimate complicated models with multiple constructs (including unobserved variables), indicator variables, and structural routes without limitations on input data distribution, in contrast to other structural modelling techniques (Hair et al., 2018). This means that PLS-SEM useful for observing the relationship between latent variables because it enables researchers to simultaneously

test and estimate a hypothesized relationship in each conceptual model in order to establish the potential correlation between dependent and independent variables.

In this research, the PLS-SEM method will be used to test factors that will be proposed and the correlation of the factors with actual Purchase Decisions or another factor that might be related, so Carousell can emphasize the tested factor to improve the actual Purchase Decisions of consumers. Data were obtained through a Google form questionnaire and shared through the internet. The items used were adjusted from the proposed variables above, and calculation will be done using PLS Software, namely SmartPLS 4.0.

3.5. Analysis Model

3.5.1. Measurement Model

Validity and reliability will be measured from the questionnaire given to the respondents and tested using validity and reliability testing (r Count, r Table, Cronbach's Alpha). Testing the validity and reliability of a questionnaire's results is intended to verify the accuracy and credibility of answers consistency of the responses and the data gathered (Saleh et al., 2017).

The answer will be deemed valid to be calculated when the result of the r Count is higher than the r Table; then, it will be deemed valid. This research employed the standard of Pearson where the r Table value is 0.3 and with the r Count should be higher than 0.3 for the input to be deemed valid (Alamsyah et al., 2018; Elisabet et al., 2022; Reyta, 2019; Uluvianti et al., 2022).

The answer will be deemed reliable and consistent to be used when the result of Cronbach's Alpha is higher than 0.6; then, it will be considered reliable (Habidin et al., 2015; Rudiansyah et al., 2022; Wikarsa & Angdresey, 2021). It is also stated by (Elisabet et al., 2022; Sopiyan & Kusmayadi, 2022) that reliability can be defined as measurement results using the same object that will produce the same data.

3.5.2. Structural Model

Multiple linear regression analysis is a model used in this research to analyze the influence of the independent variables used in this research on the dependent variables used in this research (Elisabet et al., 2022; Ginting et al., 2022). With this model, the independent variables can be measured from their influence towards the dependent variables in this research (Mitchev & Nuangjamnong, 2021). The regression analysis model used in this research is presented in the form of a mathematical equation given as follows:

$$T = \beta_{10} + \beta_{11}IQ + \beta_{12}SQ + \beta_{13}S + \beta_{14}P + e$$

$$PD = \beta_{20} + \beta_{21}T + \beta_{22}EU + \beta_{23}WOM + e$$

Where the explanation of each symbol used is as follows:

T = Trust

IQ = Information Quality

S = Security

P = Privacy

EU = Ease of Use

PD = Purchase Decisions

SQ = Service Quality

WOM = electronic Word of Mouth

e = Error

β = Regression Coefficient

4. Findings and Discussions

With the questionnaire that was given to the respondents, we gathered a total of 174 respondents from the public that met the criteria of being a Carousell user, that already conducted a purchase within the application and gave meaningful answers that can be used in this research. For the computation and processing of the data gathered from the respondents, the author uses the PLS calculation software to compute the data, namely SmartPLS 4.0. SmartPLS 4.0 is the latest software version of SmartPLS,

which allows the user to evaluate and calculate the hypothesized model. This software calculates the data using the Partial Least Square Structural Equation Modeling (PLS-SEM). The PLS-SEM is a statistical technique that allows researchers to simultaneously test and estimate a hypothesized relationship in each conceptual model to establish the possible correlation between dependent and independent variables, thus effectively observing the relationship between latent variables (Apau & Koranteng, 2019). The PLS method also provides a precise calculation of the questionnaire results, which helped us to study the importance of each indicator within the variables, which can be used to solve weak relationships and strengthen the relationship result, as well as a practical contribution (Girsang et al., 2020).

4.1. Demographic

The demographic tables below contain the information provided by respondents to the questionnaire, explaining the profile of respondents that has been sorted and examined in accordance with their responses. There were 174 respondents in total that participated in the survey and provided information that was relevant to the study. the following is the statistical demographic of the respondents;

Table 2. Respondent's Profile

Age		
Characteristic	Frequency	Percentage (%)
10-25	129	74.14%
26-41	33	18.97%
42-57	11	6.32%
58-76	1	0.57%
Above 76	0	0

Gender		
Characteristic	Frequency	Percentage (%)
Male	81	46.55%
Female	93	53.45%

Education		
Characteristic	Frequency	Percentage (%)
Highschool (SMA) or Equal	90	51.72%
Diploma or Equal (D1 - D3)	17	9.77%
Bachelor (S1) or Equal	59	33.91%
Master (S2) or Equal	7	4.02%
Doctor (S3) or Equal	1	0.57%

Occupation		
Characteristic	Frequency	Percentage (%)
Students or College Students	120	68.97%
Employee	27	15.52%
Housewife	10	5.75%
Entrepreneur	15	8.62%
Lecturers	2	1.15%

Domicile		
Characteristic	Frequency	Percentage (%)
Outside Java	14	8.05%
Jabodetabek	116	66.66%
Outside Jabodetabek (still in Java)	44	25.29%

How often do you use Carousell to shop weekly?		
Characteristic	Frequency	Percentage (%)
1-3x transactions per week	128	73.56%
4-6x transactions per week	35	20.11%
More than 6x transactions per week	11	6.32%

How much do you spend on Carousell weekly?		
Characteristic	Frequency	Percentage (%)
Less than Rp. 500.000 per week	103	59.2%

Rp. 500.000 - Rp. 2.000.000	63	36.21%
More than Rp. 2.000.000 per week	8	4.6%

We may view the demographics of the respondents who filled out the questionnaire and contributed within with their answers based on the respondent's profile table that is provided above. The table gives categories of profiles along with each characteristic's frequency (total number of answers) and percentage for each category of respondent's profile. From the tables provided, we can see that the majority of Carousell users are within the age range of 10-25 years old (Gen Z) with the percentage of 74.14% from total respondents, or 129 respondents. Most respondents are female, with the percentage of 53.45% from total respondents, or 93 respondents. Most of the respondent's last education are high school (SMA) graduates, with the percentage of 51.72% from total respondents, or 90 respondents. Most of the respondent's current occupation is student or college/university students, with the percentage of 68.97% from total respondents, or 120 respondents. Most of the respondent lives within Jabodetabek, with the percentage of 66.66% from total respondents, or 116 respondents. With most of the respondents only conduct 1-3 transactions per week, amounting at 128 respondents, or 73.56%. Lastly, most of the respondent spent less than Rp. 500.000 per weekly transaction, totaled at 103 respondents, or 59.2%.

4.2. Measurement Model

4.2.1. Validity and Reliability Testing

The purpose of the validity and reliability testing conducted for this research, as stated in the preceding section, is to evaluate the accuracy and reliability of the questions and responses from the questionnaire that was employed in the study. These are used to determine the research indicators given to respondents is appropriate and can be used for the analysis of this research. The results of the validity and reliability tests are shown in the table below;

Table 3. Reliability Test Result

Variable	Cronbach's Alpha	Result
Information Quality	0,602	Reliable
Service Quality	0,657	Reliable
Security	0,650	Reliable
Privacy	0,603	Reliable
Trust	0,615	Reliable
Ease of Use	0,635	Reliable
WOM	0,628	Reliable
Purchase Decisions	0,631	Reliable

Table 4. Convergent Validity Test Result

Variable	Item	Loading Factors	Composite Reliability	Average Variance Extracted (AVE)
Information Quality	IQ1	0,655	0.762	0.517
	IQ2	0,628		
	IQ3	0,629		
	IQ4	0,703		
	IQ5	0,791		
Service Quality	SQ1	0,576	0.725	0.583
	SQ2	0,668		
	SQ3	0,591		
	SQ4	0,764		
Security	S1	0,614	0.778	0.541
	S2	0,709		
	S3	0,630		
	S4	0,599		
	S5	0,676		
Privacy	P1	0,579	0.784	0.648
	P2	0,679		
	P3	0,582		

Trust	P4	0,511	0.758	0.612
	T1	0,603		
	T2	0,732		
	T3	0,762		
	T4	0,533		
Ease of Use	EU1	0,709	0.757	0.609
	EU2	0,630		
	EU3	0,599		
	EU4	0,676		
Word of Mouth	WOM1	0,709	0.726	0.570
	WOM2	0,841		
	WOM3	0,653		
	WOM4	0,793		
Purchase Decisions	PD1	0,507	0.773	0.631
	PD2	0,614		
	PD3	0,676		
	PD4	0,799		
	PD5	0,709		
	PD6	0,630		

From the test result shown in the table above, it can be seen that the Cronbach's alpha is already above 0.6, the AVE value of each indicator is already above 0.5, and the external loading (composite reliability) is already above 0.7, which indicates that the Convergent Validity and Reliability Test of the proposed variables is valid and reliable, in which this result indicates that the answers collected from the respondents are considered valid and reliable and can be processed to calculate the data in this that study.

4.2.2. Discriminant Validity Testing

Next measurement model, namely the discriminant validity, is also displayed on the following table, discriminant validity contains a squared root of the AVE that shaped in a diagonal pattern, with another correlating coefficient outside the diagonal. The discriminant validity table that is displayed below are based on the Fornell and Larcker Criterion, with the diagonal pattern (square root of AVE) written in bold, the table is displayed as follows;

Table 5. Discriminant Validity Test Result

	Ease of Use	Information Quality	Privacy	Purchase Decision	Security	Service Quality	Trust	WOM
Ease of Use	0.780							
Information Quality	0.432	0.719						
Privacy	0.403	0.374	0.805					
Purchase Decision	0.404	0.465	0.282	0.794				
Security	0.491	0.407	0.341	0.441	0.736			
Service Quality	0.210	0.282	0.148	0.265	0.323	0.763		
Trust	0.319	0.330	0.415	0.293	0.337	0.278	0.782	
WOM	0.326	0.366	0.223	0.398	0.395	0.176	0.157	0.755

Based on the discriminant validity table displayed above, all the variables are deemed valid, since every number that are diagonally written in bold, has a square root value from the AVE, while the numbers below the diagonal does not exceed the value in the diagonal.

4.3. Structural Model

4.3.1. Multiple Linear Regression of Trust

$$T = 1.6263 + 0.1404 IQ + 0.1398 SQ + 0.1843 S + 0.1756 P + e$$

Table 6. Multiple Linear Regression of Trust

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1,626293	0,304206	5,346022	2,880301
IQ	0,140377	0,076776	1,828402	0,069252
SQ	0,13977	0,062928	2,221109	0,027672
S	0,184293	0,062933	2,928391	0,003877
P	0,175585	0,071463	2,456999	0,015021

From the linear regression calculation for the dependent variable Trust (T), we can see that there are only three out of four independent variables that significantly affect the Trust variable, namely, the Service Quality (SQ), Security (S), and Privacy (P). From the linear regression table given above, we can see that with every increase of one unit of variable, Service Quality increased by 0.1398 units, Security increased by 0.1843 units, and Privacy increased by 0.1756 units. This shows that Trust increased for every one unit increase of independent variables, and each relationship the independent variable has with the dependent variable is positive and unidirectional.

However, looking at the p-value or significance level of each independent variable's calculation, we can see that only three out of four variables that can be considered significant ($\alpha \leq 0.05$), thus meaning that only three out of four proposed hypothesis that can be accepted. The insignificant hypothesis is the Information Quality, in which the hypothesis is rejected (H1: Information Quality has a positive impact towards Trust). The hypothesis is rejected due to the result of calculation shows that the p-value Information Quality variable has, 0,0693, is more than the 0.05 significance level.

4.3.2. Multiple Linear Regression of Purchase Decisions

$$PD = 0.8189 + 0.2376 T + 0.2450 EU + 0.3159 WOM + e$$

Table 7. Multiple Linear Regression of Purchase Decisions

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0,818863	0,326315	2,509428	0,013028
T	0,237552	0,081188	2,925938	0,003904
EU	0,245002	0,071022	3,449666	0,000708
WOM	0,315887	0,081635	3,869518	0,000155

From the linear regression calculation for the dependent variable Purchase Decisions (PD), we can see that there are three independent variables that intercept the Trust variable, namely, the Trust (T), Ease of Use (EU) and Word of Mouth (WOM). From the linear regression table given above, we can conclude that if the value of Trust (T), Ease of Use (EU) and Word of Mouth (WOM) is equal to zero, we get the value of Purchase Decisions (PD) of 0.8189. And with every increase of one unit of variable, Trust increased by 0.2376 units, Ease of Use increased by 0.245 units, and Word of Mouth increased by 0.3159 units. This shows that each relationship the independent variable has with the dependent variable is positive and unidirectional. For their significant level, all the independent variables are significant, since the p-value that each independent variables has, is less than 0.05, meaning that every independent variable here significantly impacting the Purchase Decisions.

4.4. Path Coefficient

The tables that are displayed below would explain this research's proposed framework model hypothesis (H1 – H7), which also includes the graphic portray of the framework. The tables alongside the framework model are displayed as follows:

Table 8. Path Coefficient

Hypothesis	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P values	Results
Ease of Use -> Purchase Decision	0.072	3.572	0.000	Accept
Information Quality -> Trust	0.076	1.554	0.120	Accept
Privacy -> Trust	0.072	4.190	0.000	Accept
Security -> Trust	0.068	2.008	0.045	Accept
Service Quality -> Trust	0.071	2.197	0.028	Accept
Trust -> Purchase Decision	0.074	2.242	0.025	Accept
WOM -> Purchase Decision	0.064	4.497	0.000	Accept

Based on the path coefficient computation given, we can conclude that from 7 proposed hypothesis, 6 hypothesis is accepted, while there is 1 rejected hypothesis, namely the Information Quality => Trust (H1), meaning that it has negative effects, thus are rejected, and were not supported.

4.5. Discussions

From the calculations and computations of the respondent's answers, we can see that six out of seven proposed variable hypotheses are supported, with only one rejected, meaning that the rejected variables have little or no effect towards the dependent variables.

The second hypothesis, Service Quality has a positive impact towards Trust, is proven accepted, meaning that with good service quality, the customers would likely trust Carousell as an E-commerce vendor. This hypothesis is in line with other previous works that are used as a reference (Azli et al., 2011; Kristanto et al., 2022; Li & Xue, 2021; Pasaribu et al., 2022) which also accept the proposed hypothesis. Service quality affects trust because users need the services provided by Carousell. When Carousell provides fast, reliable services that can answer user needs, a sense of trust will emerge from the form of responsibility that Carousell provides. Users believe in the performance provided by Carousell so that users can use all the services needed to carry out the transactional process of buying and selling activities.

The third hypothesis, Security has a positive impact towards Trust, is proven accepted, meaning that with a highly secured system or a high measure of security within Carousell, the customers would likely trust Carousell. This hypothesis is in line with other previous works that are used as a reference (Aboobucker, 2019; Bojang, 2017; Corbitt, 2008; Eid, 2011; Foroutan et al., 2022; Hidayat et al., 2016; Mitchev & Nuangjamnong, 2021; Shareef et al., 2019) which also accept the proposed hypothesis. What makes security affect trust is Carousell's security system, which gives user a feeling of secureness when using the application. This security system is essential because users store sensitive data regarding their personal, financial and transaction within the platform. What worries user is the occurrence of leaks or misuse of sensitive data that might lead users to experience negative impacts. By providing a high level of security, users will have more confidence in filling in the data needed to complete online buying and selling transactions.

The fourth hypothesis, Privacy has a positive impact towards Trust, is proven accepted, meaning that with guaranteed privacy within Carousell systems, the customers would likely trust Carousell. This hypothesis is in line with other previous works that are used as a reference (Aboobucker, 2019; Bojang, 2017; Eid, 2011; Foroutan et al., 2022; Girsang et al., 2020; Hidayat et al., 2016; Mitchev & Nuangjamnong, 2021; Shareef et al., 2019) which also accept the proposed hypothesis. Because users must fill in personal data when using Carousell, users also need to be sure that the data is only used as it should and does not violate existing regulations. Confidence arises when there is transparency from Carousell, which shows the privacy policy regarding the data received. Users can freely determine

whether to provide personal data based on the privacy policy according to the user's consent. What Carousell needs to pay attention to regarding privacy is how they can maintain, safeguard, and care about the user's data. That way, the user's data will be guaranteed and to be used according to their needs only.

The fifth hypothesis, Ease of Use has a positive impact towards Purchase Decisions, is proven accepted, meaning that with an easy-to-use application and systems, meaning that it is easy for the users to operate the application's features or menu, the customers would more likely decide to purchase products within Carousell. This hypothesis is in line with other previous works that are used as a reference (Akbar et al., 2020; Ayuningtiyas & Gunawan, 2018; Elisabet et al., 2022; Mbete & Tanamal, 2020; Rahmawan & Hidayat, 2020; Rudiansyah et al., 2022) which also accept the proposed hypothesis. Each user has a different experience when using technology. Even though everyone has a different perspective on the ease of use of technology, it is a good idea for a website or application to be accessible to people of all generations. By providing convenience in using Carousell, users do not need to spend more effort to learn how to use a platform. Interaction with the system easily influences Carousell users to make purchases due to the minimal barriers.

The sixth hypothesis, electronic Word of Mouth has a positive impact towards Purchase Decisions, is proven accepted, meaning that with a positive direct or indirect interaction with previous buyers, positive information exchange mechanism, and positive word of mouth spread online, would more likely influence the customers to purchase products within Carousell. This hypothesis is in line with other previous works that are used as a reference (Imaduddin et al., 2022; Lara & Thabrani, 2022; Muhiban & Karina Putri, 2022; Sopiyan & Kusmayadi, 2022) which also accept the proposed hypothesis. Some users have never seen or used goods directly when shopping online. So, with reviews or recommendations from others, this becomes a reference for product knowledge that can determine purchasing decisions. Users will feel confident when other users say so. When a product or sellers gets positive reviews, the user's perception of the product or sellers is also positive. On the other hand, if it gets a negative review, it will also affect the user's unfavorable perception of purchasing the product from the seller.

The seventh hypothesis, Trust has a positive impact towards Purchase Decisions, is proven accepted, meaning that, with customers that trust Carousell as an E-commerce vendor to conduct the transaction within, then the customers would more likely decides to purchase products within Carousell. This hypothesis is in line with other previous works that are used as a reference (Elisabet et al., 2022; Imaduddin et al., 2022; Indra et al., 2022; Rudiansyah et al., 2022; Suwaryu & Taufiqurahman, 2022) which also accept the proposed hypothesis. In the previous discussion, service quality, security, and privacy influence building good trust with users. If the user feels confident with a platform, they feel confident in getting the expected output. The output can be in the form of guarantees, accountability, services, to products from the results of transactions.

In contrast with the accepted hypothesis, one hypothesis is rejected, namely the first hypothesis, Information Quality has a positive impact towards Trust, which in this research is rejected. PLS-SEM calculation, bootstrapping, and the multiple linear regression calculation are conducted and give the same result, in which the hypothesis is rejected. Contrary to other research papers used earlier as a reference for this hypothesis, which accepts the hypothesis, this research finding declines the hypothesis. However, research conducted by (Eid, 2011; Mbete & Tanamal, 2020) also declines the hypothesis, which gave reasons that the rejection is caused by the customers that did not consider the information quality given to be as crucial as other quality given, which in this case is the service quality provided by Carousell. This means that customers' trust in Carousell is influenced more by the quality of services given by Carousell and is considered more important than the information content given by Carousell or the sellers.

5. Conclusion

This research journal examines factors influencing Indonesian Carousell E-commerce platform users to purchase products within Carousell E-commerce. This study finding shows that systems quality, security, and privacy positively affect users' trust and ease of use, and electronic word of mouth and trust positively influence the purchase decisions made by customers. This means that with high systems quality, defined security regulations, and guaranteed privacy, the customers would more likely trust Carousell. Furthermore, influenced by an easy-to-use application, positive word of mouth from previous buyers, and high trust, customers would be more likely to shop and purchase products within Carousell's E-commerce. While on the other hand, Carousell's information quality has no significant effect that influences the trust of users of Carousell in Indonesia.

To solve the insignificance, the writer recommends that Carousell implement a strategy to increase their information quality, which can be done by giving relevant, complete, and precise information regarding sellers in Carousell, giving clear policy to the sellers to give complete information that is easily understood regarding products listed, so the customer would gain a clear understanding about products that is listed, thus increased the quality of information given to the customer. For further research, this model can be implemented in other research that also discusses factors that influence purchase decisions to be seen by other E-commerce vendors.

This research has several limitations. The first limitation is the number of respondents which is only 174 people; of course, more is needed to describe the situation that occurred. In addition, the object of this research is only focused on Carousell, which is only one of many other e-commerce in Indonesia. So, from these limitations and shortcomings, future researchers can improve and expand their research. In future research, there will likely be an increase in the number of respondents and other variables that affect many things in this study.

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