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Behavior of university students cannot buy smartphones

Ihsan Effendi[1], Adelina Lubis[2*)], Nasib Nasib[3]
[12]Department of Magister of Management, Universitas Medan Area, Indonesia
[3]Program Studi Manajemen, Universitas Mahkota Tricom Unggul, Indonesia

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ABSTRACT

This research aims to develop a consumer buying model, especially for underprivileged students, especially during the COVID-19 pandemic, which forces students to buy gadgets for college needs. This research was conducted to find out how students make purchases so far. As a result of these changes, it is necessary to study the variables that affect the purchase of these students. The research was conducted at the University of Muhammadiyah North Sumatra (UMSU; Muhammadiyah University of North Sumatra), Medan Area University (UMA), and the Islamic University of North Sumatra (UISU; Islamic University of North Sumatra), which are located in Medan, Indonesia. This research was conducted using a sample of 215 student respondents who bought a smartphone. This study illustrates that price affects purchase intention and actual purchase, but the ease of use does not influence smartphones.

Corresponding Author:

Adelina Lubis,
Universitas Medan Area
Email: adelina@staff.uma.ac.id

Introduction

Indonesia is one of the countries infected with the Covid-19 pandemic. Corona virus disease 2019 (COVID-19) is an infectious disease caused by the acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was first identified in December 2019 in Wuhan, the capital of China's Hubei province, and has since spread globally, resulting in the ongoing 2019-20 coronavirus pandemic. Common symptoms include fever, cough, and shortness of breath. Other symptoms may include muscle aches, diarrhea, sore throat, loss of smell, and abdominal pain. While most cases result in mild symptoms, some progress to viral pneumonia and multi-organ failure (Sari, 2020). As of April 5, 2020, more than 1.2 million cases have been reported in more than two hundred countries and territories, resulting in more than 64,700 deaths. More than 246,000 people have recovered. Because of this virus, people's activities in various countries have been disrupted, making people around the world have to stay at home to break the chain of the corona virus so it doesn't spread further. Then the economy in various parts of the world is also declining due to this virus. The Asian Development Bank (ADB) predicts that the national economic growth will only be 2.5% in 2020 or cut in half after growing 5.0% in 2019. This is due to the corona virus pandemic that is infecting various regions of the archipelago (Siahaan, 2020).

Covid 19 has spread throughout Indonesia, and it is not clear when this condition will end. However, physical policies are geared towards stopping the spread of the epidemic, forcing a change from formal education in schools to learning from home, with an online system, on a national scale. This year's national exam must be abolished. This condition is not much different from universities that provide distance

education. If traced, it turns out that not everyone knows and understands that students are relatively unequal where not all students have the same economic level. In other words, this online learning system has the potential to create socio-economic disparities that have occurred so far. Gaps also occur in students. The shift of the entire education system to online as imposed by the pandemic renders students incapable of learning on the one hand and poses a significant threat to their graduation. Students must struggle to buy *smartphones* with advanced technology to follow the online education process smoothly. According to the Minister of Education and Culture (Mendikbud) Nadiem Anwar Makarim, the principle of publishing educational policies during the COVID-19 pandemic is to prioritize the health and safety of students, educators, education staff, families, and the community. This means that the online lecture system still implemented until Covid 19 did not pose a threat to students.

With this situation, millennials are no longer awkward with technology. Today's students are the millennial generation who have adapted to technology, especially communication technology. With the facilities provided by universities, they can access the Internet with extraordinary progress. Almost every campus has access to a wired network, and almost every student now has a mobile device in their hands. With this condition, the university can no longer provide this facility. This encourages students to have these tools to learn and communicate online. However, on the other hand, not all students can adapt due to various circumstances, especially regarding purchasing smartphones and internet quotas. Students do not prefer e-instruction to face-to-face lectures during lockdown (Abbasi et al., 2020). Many students protested the learning process and the shaky and expensive internet connection. Not all smartphones used by students can be used for online lectures, mainly if lecturers use video communication such as zoom. Developing countries face many challenges related to institutional readiness in the significant pandemic era. The lack of infrastructure and the scarcity of funds, and policy problems in the education sector are the most common problems in developing countries (Adeoye et al., 2020).

Consumer behavior during COVID-19 involves the thoughts, feelings, experiences, and actions they take. Students do careful thinking in making purchasing decisions by comparing products that match their needs and desires. Student behavior is very decisive, because the impact of Covid-19 is an economic shock which results in addition to economic needs in the world of education also requiring forced adjustments so that the learning process can still run properly. Therefore, students need more needs to support them in learning, one of which is using a smartphone. The intensity *of smartphone*s by students in the millennial era is often used (Aribowo et al., 2019). The results of the study are that knowledge does not affect student behavior in dealing with the corona virus, attitudes affect student behavior in dealing with the corona virus and knowledge and attitudes collectively affect student behavior in dealing with the corona virus (Mudawaroch, 2020). Students make purchasing decisions based on their nature, one of which is the feeling of wanting to be appreciated, respected, and having their needs and desires fulfilled (Bayanova et al., 2019).

Theoretical Framework And Hypotheses Development

This research was conducted because of the impact of covid-19 which resulted in students behaving in a consumer manner because learning needs were required by students to support equipment for the learning process so that there was an increase in smartphone purchases.According to Kotler et al. (2019), purchasing decisions are influenced by introductory psychology, which plays a vital role in understanding how consumers make purchasing decisions. The increasing acceptance of internet behavior and e-commerce has become one of the most famous studies in shopper behavior (Wang et al., 2020). With the outbreak of covid 19, a National Research Foundation (NRF) survey in India revealed changes in consumer behavior where 9 out of 10 consumers have changed their traditional shopping habits, and more than 50% of consumers have ordered products online, including consumption habits and consumer behavior across genders. Gender and age (Chauhan & Shah, 2020). Studies in China confirm that the fear of Covid 19 encourages social presence in anticipation of seeking affection, acceptance, and social information that drives buying behavior (Addo et al., 2020). In Indonesia, consumers are also experiencing changes. Consumers tend to be more careful in choosing, paying attention to what consumers prioritize (Widayat & Arifin, 2020).

With the rise of e-commerce, smartphone purchases have become one of the most famous studies in consumer behavior (Di Muro & Murray, 2012). The Technology Acceptance Model (TAM) is one model for understanding the factors that influence the introduction of the use of computer technology which Fred Davis first proposed in 1986 (Thongpapanl et al., 2018). TAM is a derivative of the Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975). Studies based on the Technology Acceptance Model (TAM) and Information Adoption Model (IAM) are practical and valuable. Studies show that smartphone shopping is increasingly popular among young people (Shah et al., 2016). When consumers decide to buy electronic goods, it is influenced by several factors. The main essential factors identified were time-saving, best price, and ease of use. The price of electronic equipment is meager. The low price inspires people to buy these gadgets

(Di Muro & Murray, 2012). Almost every student has a cellphone for their needs. Students can do any activity with this cheap mobile phone, including online classes.

Hypothesis

The development of science and technology is relatively rapid to date, such as changes in the future of humans for the better, more accessible, cheaper, faster, and safer. With the background of the problems that have been described, the research conducted has several problem formulations: (1) price (Price of smartphones) affects the purchase intention (Intention to buy) of underprivileged students, (2) ease of use (Ease of use) affects the purchase intention (Intention to buy) of underprivileged students, (3) purchase intention (Intention to buy) affects the actual purchase of underprivileged students.

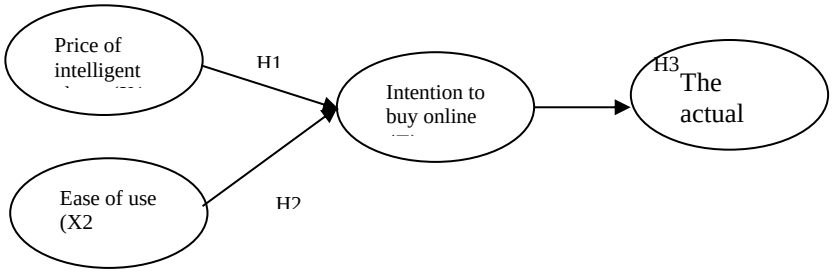

Figure 1. Research Model Research.

Method

This research uses a specific population or sample. Data collection uses research instruments. Data analysis is quantitative or statistical, with the aim of testing hypotheses. The research method uses quantitative methods, and the focus of this research is to determine the magnitude of the influence of the variables studied. The study was conducted to determine the value of each variable, whether one or more independent variables, by making a relationship or comparison with other variables. The participants in this study were students from several universities in the city of Medan, including the University of Muhammadiyah North Sumatra (UMSU), Medan University Area (UMA), and the Islamic University of North Sumatra (UISU). The distribution of the questionnaire was carried out using a google form which was distributed through the WhatsApp application. With this method, 215 samples of students who felt less capable were collected. The sample collection technique uses Google Forms as an online survey medium. Questionnaires were given to respondents online, in the form of a Google Forms link with a google form web address for the questionnaire to get responses from respondents regarding the indicators of each variable. According to Sugiyono (2018), the research instrument is a tool used to measure the results of research, in this study the instrument used was LISREL 8.5 software.

The information review provides several descriptions of the variables related to the development of research and the measurement scale of variables using path analysis that connects the variables to form a pattern of relationships for each variable. This relationship pattern is assisted by LISREL 8.5 software. Model data, validity, reliability, model measurement, and the significance of the structural model to test the degree of fit between the fit test and the boundary value that shows a good level of fit for each Goodness of Fit (GOF) are as follows: In testing the consistency or stability of a measuring instrument or construct. The concept of reliability must be in line with qualitative validity. An actual construct must be valid. The measuring instrument is called reliable if a symptom at different times always shows the same result. Validity is a criterion to indicate whether the research results can be accepted with specific criteria in the validity of the questionnaire items to measure the accuracy and precision of the items being measured. Valid items are indicated by the correlation between items in the variables. To determine a correct item, it must correlate with a significant level of 0.05.

Results and Discussions

This research was conducted on students from the Muhammadiyah University of North Sumatra (UMSU; Muhammadiyah University of North Sumatra), Medan Area University (UMA), and North Sumatra Islamic University (UISU; North Sumatra Islamic University), which are located in Medan, Indonesia. Questionnaires were distributed via google form to students through their representatives. After reaching 200 respondents, we closed the questionnaire that had been distributed. The final sample consisted of 215 respondents. The sample

consisted of 57% women and 43% men. Respondents vary in age between 18-22 years, and almost all of them do not have a job or steady income and consider themselves to be less well off.

Measurement of reliability (reliability test) reliability
Is done through the fit model test. This evaluation is carried out on each construct or measurement model the relationship between latent variables and several variables observed separately through validity evaluation.

Table 1 *Standard Loading Factor* (SLF)

Construct.	t-value	Conclusion
Price11	9.45	Accepted,
Price12	9.30	Accepted,
Price13	8.79	Accepted,
Ease21	4.76	Accepted,
Ease22	6.23	Accepted,
Ease23	5.57	Accepted,
Int31	9.04	Accepted,
Int32	11.03	Accepted,
Pur41	6.08	Accepted,
Pur42	8.03	Accepted,

The measurement and evaluation of the reliability of the variable indicate that the variable has accepted the conclusion. Thus the variable can be used in this study.

Validity
Evaluation of the validity of the measurement model shows the standard loading factor (SLF). The measurement model has Accepted validity because the Standard Loading Factor is SLF > 0.5.

Table 2. Variance Extracted, Reliability Model Stability Alienation

Variables	Variance Extracted	Validity.
Price of intelligent phone (Price)	0.64	Accepted,
Ease of use (Ease)	0.57	Accepted,
Intention to buy online (Int)	0.53	Accepted,
The actual Purchase (Pur)	0.58	Accepted,

Data Analysis
Structural Equation Modeling (SEM) was used as a confirmation technique for a model. The model must be determined correctly based on the type of analysis under study; in the end, the researcher tries to confirm the model. To build the correct model using two variables, namely exogenous and endogenous variables. Exogenous variables can be used in the graphical version of the model as arrow-sending variables, which indicate predictive variables, which are endogenous. The endogenous variable is the recipient of the arrow in the model.

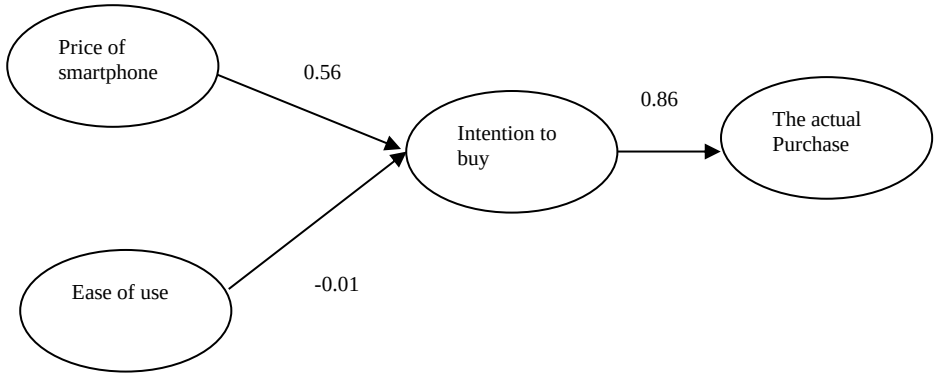

Figure 2. *Standard Solution* Data Analysis

After measuring the standard solution model, the next step is to analyze the structural model of the research model. This analysis is related to testing research hypotheses. The research hypothesis is accepted if the absolute value of the number t is more significant than 1.96 with the coefficient signed by the proposed research hypothesis.

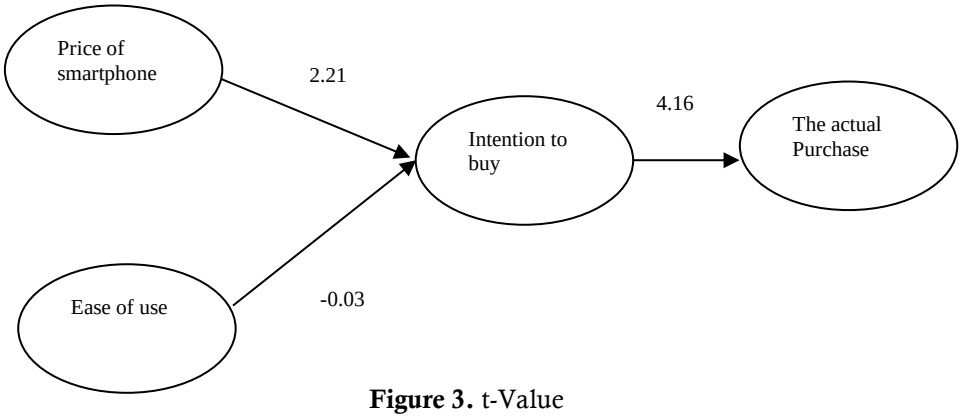

Figure 3. t-Value

The significance of the research model

Table 3. the Significance of the Research Model

Hypothesis	Description	t Value	Result
Hypothesis 1	Price (Price of a smartphone) affects the purchase intention (Intention to buy) of underprivileged students	2.21	H_0 rejected
Hypothesis 2	Ease of use affects poor students' intention to buy	-0.03	H_0 accepted
Hypothesis 3	Purchase intention (Intention to buy) affects the actual purchase of underprivileged students Influence	4.16	H_0 rejected

Model Compatibility is compiled by alternative models and models, where this conformity measurement compares the model created by the researcher to be matched with other models. For this reason, the Goodness of Fit Index (GOFI) Structural Model is as follows:

Table 4. Goodness Of Fit Index (GOFI)

GOFF	t-value	Standard Value for Good Fit	Conclusion
p-value	0.00008	p-value 0.05	Not Good;
RMS	0.077	RMSEA 0.08	Good;
AGFA	0.90	AGFI≥ 0.90	Good;
CFI	0.91	CFI 0.90	Good;
IF	0.91	IFI 0.90	Good;
GFI	0.94	GFI 0.90	Good;

From the Goodness of Fit Index (GOFI) table above, the structural model shows that the model is considered good because there is only one Goodness of Fit Index (GOFI) indicator, namely the *p-value*, that is less fit. In contrast, RMSEA, AGFI, CFI, IFI, RFI, and GFI shows a reasonable conclusion of the Goodness Of Fit Index (GOFI).

Price is very decisive in choosing a cellphone for college. Students who carry out this process can search for information for lecture needs. In looking for a cellphone, compare facilities, technology, and what other similar products have and do not have, including price. The price of cheap gadgets or *smartphones* for students is essential for college needs before and during the covid 19 pandemic. Another more exciting thing is that 2 out of 3 respondents think that when the technology they have meets their needs, respondents consider the price according to the features. Price is not an issue and is considered a good investment than *a smartphone* is a part of. According to students, previously, they had had *smartphones* long time. However, the use *of smartphones* was only limited to communication needs and social media such as Instagram, Facebook, and Instagram. During the pandemic, the need for *smartphones* turns out to have a more important role, namely in increasing knowledge such as downloading journals and other academic-related activities such as downloading academic journals. Furthermore, with *a smartphone* for two million rupiahs, students can communicate well using zoom or google meet.

Another finding in this study is that the ease of use *of smartphones* is no longer an essential factor. According to respondents, all brands of gadgets with an Android platform have almost the same usage. In general, *smartphones* sold have the same operating system. The difference is their hardware, such as RAM, memory capacity, and cameras. The use *of smartphones* is an important thing that must be considered in lectures. By using *smartphones* in education, it is necessary to make the right consumer decisions in purchasing gadgets. The intention is also essential in deciding to buy a gadget. Buying decisions must be based on a solid intention before actually buying. From the results of this research model, it can be seen that the price of gadgets and ease of use are the most critical variables in the formation of purchase intentions.

This study uses the TAM (Technology Acceptance Model) approach as a research model to determine the effect of using technology. By the TAM concept itself, this study measures the effect of price, including perceived ease of use. Theoretically, mobile phone price and ease of use can positively influence behavior through intention. (Shao, 2020). However, the results of this study illustrate that the ease of use does not influence the intention to buy *smartphones* for underprivileged students. So that in the study, many opinions were produced regarding the behavior of students who need to support smartphones for the learning process, because the impact of the pandemic makes it difficult for almost everyone to be affected, even though the need is very high, but for the less fortunate it is still difficult to obtain it.

Conclusions

The conclusion of this study is that there is a significant influence of smartphones on the purchase intentions of underprivileged students, and there is no significant effect between ease of use in the purchase intentions of underprivileged students and there is a significant influence on the purchase intentions of smartphones in underprivileged students. so that the behavior of students towards the purchase of smartphones depends on the economic income of each family. High demand for smartphone purchases from affluent families.

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