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Mobile User's Satisfaction during the COVID-19 Pandemic in Indonesia

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Abstract: WHO officially declared the COVID-19 Coronavirus as a pandemic on March 11, 2020. Since the WHO issued the virus outbreak and mandatory social distancing, home becomes very important to avoid spreading viruses. Since many people have to stay at home, the COVID-19 pandemic has significantly triggered the growth of e-commerce in Indonesia. The growth of e-commerce in Indonesia cannot be separated from the growth rate of mobile cellular technology. With many staying at home, all activities and transactions are carried out through mobile phones, including shopping at market places increasingly popular nowadays. The population of this study is mobile phone users in Indonesia. An objective sampling technique was used to distribute the questionnaires (online survey) to the 300 respondents. This study uses the TAM model and the commitment-trust theory of relational marketing. This study also emphasizes the differentiating factors of TAM research from most previous studies. That factor is that some studies consider trust and TAM as constructs. TAM can test user behavioral intentions, acceptance, and adoption of new technologies by considering the two most basic constructs – PEOU and PU. The relationship between all research antecedents and dependent variables was found to be significant. Consumer needs for cellular phone products need to consider various consumer tastes and preferences. In designing a product during an increasing pandemic, the suggested model can help in increasing consumer satisfaction. This means that customer satisfaction will increase if PU, PEOU, and trust formation are appropriately managed. In turn, the planned implementation of PEOU, PU, and trust will meet user expectations, and users will be happy with their overall experience using mobile services. The research aims to reveal whether mobile phone use could satisfy consumers during the COVID-19 pandemic. The scientific novelty in this study is that mobile phone use can avail of business opportunities and work from home and school from home.

Keywords: COVID-19, Indonesia, mobile user, satisfaction.

印度尼西亚新冠肺炎大流行期间移动用户的满意度

摘要: 印度尼西亚的电子商务增长离不开移动蜂窝技术的增长速度和新冠肺炎大流行爆发。封锁迫使人们呆在家里，所有活动和交易都通过手机进行，包括在市场购物当今越来越受欢迎的。研究人群是印度尼西亚的手机用户。使用在线抽样技术，把问卷分发给 300 名受访者。本研究讨论了研究与大多数以前研究的区别因素。通过考虑两个最基本结构——和可用于测试用户对新技术的行为意图、接受度、和采用。结果发现，所有研究前因和因变量之间的关系都是显著的。消费者对手机产品的需求要考虑各种消费者口味和喜好。在大流行期间设计产品时，建议模型有助于提高消费者满意度。这意味着，如果和信任形成都适当管理，消费者满意度将会提高。反过来，和信任的计划实施将满足用户期望，用户对使用移动服务的整体体验感到了满意。

关键词： 新冠肺炎，印度尼西亚，手机用户，满意度。

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1. Introduction

WHO officially declared the COVID-19 Coronavirus as a pandemic on March 11, 2020. The Covid-19 pandemic, which started in China and spread rapidly throughout the world in a short time, is considered an emotional struggle that forces all individuals and organizations to act with new strategies. COVID-19 is also causing dramatic changes in everyday life, including the way people live in a building [1]. Since the WHO issued the virus outbreak and mandatory social distancing, home becomes very important to avoid spreading viruses.

Since many people have to stay at home, the COVID-19 pandemic has significantly triggered the growth of e-commerce in Indonesia. In the fourth quarter of 2020, Jet Commerce recorded its overall sales value increased by 36% from the previous quarter, in line with the number of transactions which increased by 53% from the third quarter, reaching more than 750 thousand transactions that occurred in various marketplaces in last three months.

The pandemic has not been better in early 2021, pushing e-commerce to expand this year. Statistics data in the Digital Market Outlook report stated that e-commerce users in Indonesia are predicted to increase by 15% this year, increasing from 138 million in 2020 to 159 million users in 2021. Meanwhile, industry revenue is predicted to increase by 26% to reach US\$ 38 million, from US\$ 30 million in 2020 [2].

The growth of e-commerce in Indonesia cannot be separated from the growth rate of mobile cellular technology. With many staying at home, all activities and transactions are carried out through mobile phones, including shopping at market places increasingly popular nowadays. Of course, cellular phone sales and cellular communication technology have also increased [1, 3]. With this phenomenon, mobile marketing has developed in several sectors, such as retail and business environments [4, 5]. This approach includes using a promotional strategy using mobile phones to communicate and promote its target customers [6, 7].

Mobile communication technology encourages companies to utilize this technology to add value to their products and services [5, 8, 9]. Mobile Internet is defined as “wireless access to the Internet through mobile communication networks (especially those using 4G technology) using handheld devices” [3]. In addition, mobile commerce is a broad term used for mobile banking, mobile tickets, mobile coupons, purchasing goods and services using mobile phones [10-12].

Almost all businesses today see mobile technology as an opportunity for excellence. As a result, the intensity of the industry is getting higher, which in turn places customer satisfaction as the primary goal for

online companies that want to increase profitability and maintain competitive advantage [5, 13].

Although the mobile phone trade is experiencing rapid growth, it is still impossible to say that this form of business is in its mature stage. From several studies, the mobile trading industry is still in fact in the early-stage category. It is also necessary to develop new platforms and develop mobile communication technology to interact and transact more effectively [14, 13]. More important is developing user behavior and managing online shopping websites to achieve a sustainable competitive advantage [15-17].

Mobile phone-based trade competition is getting higher, and considering today's more thoughtful and more educated consumers. Customer satisfaction becomes a measuring tool for a company's success [18, 19]. Customer satisfaction is also an important goal for telecommunications network operators to improve services and increase the success of the national economy [1].

The development and potential of the mobile marketing business invite researchers from various fields to contribute to advancing knowledge about the mobile device trade [20, 21]. From the marketing perspective, mobile commerce users can precisely determine target markets [7, 22].

In addition to the satisfaction variable as a measure of the success of cellular service provider companies, companies need to improve performance and experience perspectives to facilitate sustainable use of mobile internet [23]. Success in this industry certainly involves many parties, namely online retailers and service providers [12]. The development of mobile commerce also motivates service companies to build applications and market platforms better to serve customers [24, 25].

According to [20], the research construct includes consumer-based variables influencing mobile marketing acceptance, attitudes, trust, and satisfaction. This study aimed to investigate the impact of perceived usefulness (PU), perceived ease of use (PEOU), and trustworthiness on user satisfaction concerning a mobile Web site. This study discusses how PU, PEOU, and trust affect mobile user satisfaction. During the COVID-19 predicament, because of the semi-lockdown, the store comes to the consumer's home. In a country like Indonesia, consumers are restricted to grocery stores or shopping centers. Instead, stores come to our home [26], so does function for work and education. This is contrary to the flow for work, education, health, and purchasing and consumption. In-home delivery of everything, including streaming services such Netflix, cable television, is breaking the ordinary habits of physical places. It is also enhancing convenience and personalization in consumer behavior. We need to empirically study how “store comes home” affects

consumers' impulse buying and planned vs. unplanned consumption during the COVID-19 pandemic. Thus, the use of mobile gadgets is inevitable.

2. Theoretical Research Framework and Hypothesis Development

This study adopts a pre-existing model - the model used by [27]. The same model will be used in this study in the COVID-19 pandemic situation in Indonesia. This model was developed referring to TAM [28] and the commitment-trust theory of relationship marketing (Figure 1).

This study also emphasizes the differentiating factors of TAM research from most previous studies. That factor is that few studies consider trust and TAM as a construct [29, 30]. TAM can be used to examine user behavioral intentions, acceptance, and adoption of new technologies by considering the two most basic constructs – PEOU and PU [31]. In addition, the role of external variables and user attitudes are thought to be closely related to the construction of TAM. Several studies have modified the basic TAM in mobile device trade or cellular service contexts [32].

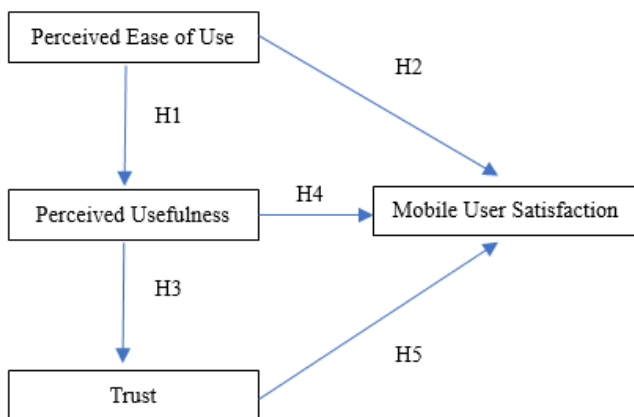


Fig. 1 Theoretical research framework

2.1. Mobile User's Satisfaction

Since the COVID-19 pandemic, mobile phones have become a medium of communication and daily transactions. The smartphone has also revolutionized business through online channels, with e-commerce involving industrial sectors such as mobile phone services. Thus, mobile phone services have become a massive sector, with more than 50% of the world's population owning a mobile phone [33]. Business in this sector consists of telecommunications and information services, including voice calls, messaging services, internet access, and other data services.

Mobile applications have tremendous potential and enormous space for development in the mobile commerce market, mainly e-commerce. Analysis of mobile applications based on business models or industry chains has been widely carried out, but empirical studies on user willingness to purchase applications are rarely conducted. Meanwhile, research on cellular telephone use to support business was

carried out to evaluate the behavior of consumers adopting traditional and derivative versions of technology such as TAM [24, 28, 34-37]. Other derivative versions of technology that have been researched include diffusion of innovation (DOI) theory [38-40] and the integrated theory of technology acceptance and use (UTAUT) [10, 11, 33, 41, 42].

Previous research focused on the continuous use of mobile data services due to the significance of retaining users. Information systems theories like the technology acceptance model and ECT are often used to form such research. Research [23] showed that perceived usefulness, ease of use, and enjoyment influence mobile internet users' satisfaction, which leads to continuance intention. Meanwhile, [9] described the significance of usefulness and ease of use towards post-adoption usage of mobile internet. Additionally, [43] supported the view that perceived usefulness and ease of use influence the continuance intention of mobile data service.

This study defines satisfaction as the overall positive mobile user experience with—and feeling for, the mobile service provided [44]. Overall, satisfaction refers to how customers rate a brand based on all encounters and experiences [43]. Mobile marketing experts agree that so far have successfully overcome the problems of customer satisfaction and adoption [45]. Determining the right target, providing satisfaction and excellent service is a benefit that must be achieved, according to their initial vision and mission [44]. [46] added that trust has a significant effect on satisfaction. User satisfaction can be one of the most critical assets of a company. Customer satisfaction is also defined as the pleasure that results from comparing the ongoing performance with initial expectations. Previous research has shown that customer satisfaction positively affects future repurchase intentions [1, 47]. There is significant evidence that the use of mobile marketing technologies is no longer a matter of choice. Instead, it has become a tool for the survival of both big and small businesses [48]. In the era of the COVID-19 pandemic, most customers prefer to shop online rather than going to physical markets, mainly due to the semi-lockdown imposed by the government. Therefore, this study uses the PU, PEOU, and trust variables expected to impact cellular user satisfaction positively. In addition, this study is unique since it explores mobile phone use during the COVID-19 pandemic.

2.2. Perceived Ease of Use

Perceived Ease of Use (PEOU) is defined as “the degree to which a person believes that using a particular system will be a free effort” [28]. Different studies have used the PEOU construct as an antecedent of e-satisfaction [9, 17, 27, 49]. Before the widespread research on consumer satisfaction using cellular phones, the PEOU variable was also used to measure

satisfaction in using IT-based services in influencing customer satisfaction [33]. If customers find IT-based self-service systems challenging to use, they may not value such service delivery channels [50, 51, 7].

Referring to the literature on information technology (IT), PEOU has been identified as the main construction to examine and assess user acceptance of technology. An important factor used in using technology to shape consumer intention is PEOU [47]. PEOU usually refers to the user's perception of whether performing a particular technical task will require mental effort on his part [52, 53]. According to Du et al. [30], personal innovation will directly increase the PEOU of 4G cellular services. PEOU and PU influence consumers' initial intention to use [54] and are the main determinants of users' attitudes [55]. PU was also found to be more useful than PEOU in predicting consumer attitudes to use mobile commerce. In this study, we define PEOU as a user's overall perception regarding the convenience of purchasing a mobile system through their mobile phone. This finding also agrees with previous research on TAM, which consistently found that PU was a stronger predictor than PEOU [9, 27, 56]. Moreover, users can adapt their behavior to the new technology if they find it easy, referring to the PEOU [27, 9].

Several studies have examined convenience in mobile commerce [16]. The increasing trend of mobile services has presented new challenges for service providers: developing more advanced and user-friendly, context-aware, and personalized mobile services for users [45]. Mobile commerce allows its users to make any transaction no matter where they are. However, we must bear in mind that some of the shortcomings of mobile servers, such as bandwidth and lack of high-speed internet, are barriers to user satisfaction with mobile commerce [57]. There must be a good infrastructure in mobile commerce to be used before customers feel happy using it for shopping.

On the other hand, they mostly find it easy to use to get it wherever they want. Thus, PEOU is considered one of the success factors in mobile satisfaction in the mobile industry. PEOU may have a positive effect on mobile commerce PU [32, 21]. Lopes et al. [19] found that PEOU is a strong predictor of PU in mobile commerce. Meanwhile, [59] argued a positive relationship between PEOU, PU, and customer satisfaction in the online shopping environment. According to [23], online businesses need to concentrate more on friendliness and providing user-friendly websites. Most scholars have discussed the importance of PEOU to customer satisfaction and overall loyalty. User guidance and support and user skills are essential factors in explaining cellular service acceptance. Thus, it is hypothesized that:

H1: There is a positive relationship between PEOU and PU.

H2: There is a positive relationship between PEOU and mobile user satisfaction.

2.3. Perceived Usefulness

Perceived Usefulness (PU) is defined as "the degree to which a person believes that using a particular system will improve his or her job performance" [28]. Researchers have also used usability to predict electronic satisfaction in online contexts, such as [60].

To maintain cellular telecommunications technology, manufacturers are working to improve the usability and utilization of modern handsets [13]. The usefulness and context of the message are related to consumer adoption of promotions sent through these modern tools [12]. TAM shows that intention is influenced by usage attitude and perceived usefulness effect [61]. Studies show that perceived usefulness stands out as a way of assessing user satisfaction with information systems [62, 63]. The use of mobile devices will positively affect behavioral intentions [20] and cellular loyalty [13]. According to [15, 19], usefulness is positively related to satisfaction.

Many studies have confirmed that PEOU and PU significantly affect user attitudes, which has a relative effect on user adoption and satisfaction [27, 55, 64, 65]. The general interest of customers in mobile commerce and service applications is usually relatively the same [66]. PU is one of the fundamental antecedents of innovation, linked to the utilitarian value that mobile technology provides to customers [47]. As usability is becoming increasingly critical in the mobile phone industry, assessing usability quality is becoming an ongoing activity [28].

On the other hand, PU refers to the extent to which target customers believe that using IT will create significant value [9, 53, 68]. PU is defined as the degree to which a user believes that using a particular system will improve his job performance, which also positively affects the user's intention to use that system [9, 68, 69]. This study defines PU as the overall assessment and perception of 4G mobile phone usability users. The high level of mobile devices for transacting, paying bills, searching for shopping information, and even entertainment makes mobile devices very useful for people in different cultures [7, 57]. [70] also explained that trust is a significant factor in user satisfaction and loyalty. On the other hand, if consumers find online vendors honest, they are satisfied and show greater loyalty.

Satisfaction plays a vital role in determining PEOU and PU [9, 65]. Previous research found that initial trust would affect PU. Lee and Jun [32] have found that PU and PEOU are essential predictors of consumer trust in the context of mobile commerce. Consumer satisfaction is considered the main construct for expansion through positive word of mouth [71]. [32] have argued that PU can also explain consumer satisfaction in mobile commerce, a crucial TAM

construct. Therefore, the following hypothesis is proposed:

H3: There is a positive relationship between PU and trust.

H4: There is a positive relationship between PU and mobile user satisfaction.

2.4. Trust

According to [72], trust in online shopping is the willingness of consumers to depend on the seller in the act of buying where the action makes the consumer vulnerable to the seller. Several previous studies [73-76] stated that trust is essential for the retail process. The studies also found that uncertainty, dependability, and risk characterize the exchange relationship between client and vendor.

Therefore, trust plays an essential role in the buyer-seller relationship in the context of online shopping [23, 58, 77]. Trust also has a positive effect on the intention to buy online [1]. Therefore, the lack of trust in online business is one of the main reasons why customers do not make commercial transactions on the web [21]. Furthermore, online customer satisfaction directly relates to repurchase intentions through online trust [59]. Trust has shown an essential factor in influencing consumer behavior towards certain technologies [58].

For online vendors, trust is crucial to increase profitability [19, 66]. In this study, we define trust as a user's overall perception of the reliability of cellular services. The main challenge for online marketers is identifying and understanding the factors that influence customer trust [19, 78]. Given that the relationship between trust and TAM in the context of online shopping is rarely investigated [29], we hypothesize that:

H5: There is a positive relationship between trust and mobile user satisfaction.

3. Research Methodology

The population of this study is mobile phone users in Indonesia. An objective sampling technique was used to distribute the questionnaires to the respondents. Three hundred questionnaires were distributed to the respondents using an online survey. Therefore, a purposive approach was undertaken to withdraw the respondents. The criteria to opt the respondents. First, the respondents experienced carrying out e-commerce, and secondly, they were eligible in terms of age to decide the shopping. To measure PU, three items were adapted from previous studies [15, 22]. The three items for measuring PEOU were adapted from [15, 28]. While the four items to measure trust were adapted from [15]. A 5-point Likert Scale, ranging from "strongly disagree" (1) to "strongly agree" (5), was used to measure PU, PEOU, and confidence levels. In order to measure the satisfaction of mobile internet users, four items were adapted from [22, 47]. In addition to measuring customer satisfaction, a 5-point

scale, ranging from "very dissatisfied" (1) to very satisfied (5), was used. Structural equation modeling was used to evaluate the causal model and confirmatory factor analysis (CFA) [79] to check the measurement model's reliability and validity. To increase the validity of the measurement items of the proposed model, a pretest and a pilot survey were conducted before the main survey. Twenty-five sets of questionnaires were distributed using a Google Form, and further reliability analysis was carried out, resulting in an overall Cronbach alpha of 0.60.

4. Results

4.1. Demographic

Table 1 presents the descriptive statistics of respondents in this study. Three hundred questionnaires were distributed; 297 were collected, which were then processed. Of the respondents, 53 percent were women, and 47 percent were men.

4.2. Measurement Model Evaluation

There are two stages in analyzing and testing the model in this study. Firstly, CFA was done to determine the pattern of each measure on a specific factor. Then, squared multiple correlations were carried out to see how well each indicator and item defined the construct [80]. On the first trial, it was discovered that the squared multiple correlations for the items were > 0.5 , which was an indication of good reliability. The factor loadings, Cronbach's alpha, average variance extracted (AVE) for PU, PEOU, trust, and customer satisfaction are shown in Table II.

Table 1 Summary of demographic characteristics of respondents

| Demographic Profile | Frequency | | | | |
|--|-----------|----------------------|-------------------|-------------------------|----|
| | | % | | % | |
| Gender | Male | 47 | Female | 53 | |
| | Age | < 20 | 21 | Between 21 and 30 years | 26 |
| | | 26-30 years | 30 | > 41years | 23 |
| Marital status | Single | 61 | Married | 39 | |
| Education level | > Diploma | 36 | Bachelor's Degree | 46 | |
| | | Master's | 11 | Ph.D. | 7 |
| Occupation | Student | 26 | Private employee | 48 | |
| | | Government employees | 19 | Other Occupation | 7 |
| Type of mobile service used by respondents | Telkomsel | 48 | Oredo | 17 | |
| | | XL | 24 | Tri | 11 |

The Cronbach's alpha coefficient is calculated to measure the reliability of PU, PEOU, trust, and customer satisfaction instruments. According to [81], an acceptable value for internal consistency must exceed the minimum of 0.70. The result of the alpha coefficient for PU, PEOU, trust, and mobile user's satisfaction in this research is 0.789, 0.767, 0.832, and 0.859, well above the minimum standard for each latent construct [80]. For testing the convergent validity of the individual construct, the standardized factor loadings were used as found in [82, 83]. Additionally, AVE was measured to assess the discriminant validity of the four constructs [80]. The AVE ranged from 0.540 to 0.605. Table 3 clearly shows the construct's discriminant validity. The result shows how AVE for each factor pair is greater than the estimated correlation between factors, thus, indicating their discriminant validity nature [80, 84].

Table 2 Validity and reliability for the dimensions of PU, PEOU, trust and mobile customer satisfaction

| Research construct | Factor loading | AVE | α |
|---|----------------|-------|----------|
| PU | | 0.546 | 0.789 |
| This mobile site makes my works and life easier | 0.704 | | |
| This mobile site allows me to acquire the information I need easily | 0.753 | | |
| Overall, this mobile site is useful | 0.759 | | |
| PEOU | | 0.540 | 0.767 |
| Learning to use this mobile site is easy | 0.811 | | |
| Becoming proficient in using this mobile site is easy | 0.779 | | |
| Overall, this mobile site is easy to use | 0.595 | | |
| Trust | | 0.554 | 0.832 |
| Based on my experience with the mobile commerce vendor in the past, I know it is honest | 0.769 | | |
| Based on my experience with the mobile commerce vendor in the past, I know it cares about customers | 0.759 | | |
| Based on my experience with the mobile commerce vendor in the past, I know it is not opportunistic | 0.757 | | |
| Based on my experience with the mobile commerce vendor in the past, I know | 0.689 | | |

it is predictable

| | | | |
|--|-------|-------|-------|
| Mobile customer satisfaction | | 0.605 | 0.859 |
| I am satisfied with this mobile commerce Web site | 0.774 | | |
| The mobile commerce Web site is successful | 0.760 | | |
| The mobile commerce Web site has met my expectations | 0.725 | | |
| I feel pleased with my overall experience of using mobile services | 0.848 | | |

Table 3 Discriminant validity of perceived usefulness, perceived ease of use, trust, and mobile customer satisfaction

| Research construct | PU | PEOU | Trust | Satisfaction |
|--------------------|-------|-------|-------|--------------|
| PU | 0.739 | | | |
| PEOU | 0.631 | 0.735 | | |
| Trust | 0.445 | 0.548 | 0.744 | |
| Satisfaction | 0.665 | 0.691 | 0.615 | 0.778 |

Notes: Correlation estimated between the factors; diagonal: square root of AVE

4.3. Structural Equation Modeling

Table 4 shows that the indices fit the model. According to [80], the chi-square value has a fundamental problem regarding its validity; it is also sensitive to the sample size. In this research, the chi-square resulted from 146,017 and chi-squared or degree of freedom 2,028, p 0,000. The goodness-of-fit index (GFI) and Comparative Fit Index (CFI) are used to establish the model fit; this is because both of the indices are not prone to the sample size [80]. The CFI, GFI, and Tucker-Lewis Index (TLI) indicate a value greater than 0.90; this is seen as acceptable. Table IV indicates the structural model of the research and the effect PU, PEOU, and trust have on customer satisfaction ($p < 0.001$). The results exhibit that PEOU correlates positively to PU, as well as PEOU with mobile user satisfaction. Therefore, H1 and H2 are supported. H3 (PU has a positive relationship with mobile user satisfaction and trust) was also supported. Lastly, H4 and H5 are supported since there is a positive correlation between PU, trust, and satisfaction. The structural model of the study is depicted in Figure 2.

Table 4 Standardized regression weight for the research model

| Research construct | Estimate | p-value |
|---------------------|----------|---------|
| PU ← PEOU | 0.670 | 0.000 |
| PEOU ← PU | 0.500 | 0.000 |
| Trust ← Trust | 0.299 | 0.000 |
| Satisfaction ← PU | 0.328 | 0.000 |
| Satisfaction ← PEOU | 0.329 | 0.000 |

Notes: Chi-square $\chi^2 = 1460.017$, CMIN/DF = 2.028, GFI = 0.933, CFI = 0.960; RMSEA = 0.059;
* Significant at $p < 0.05$

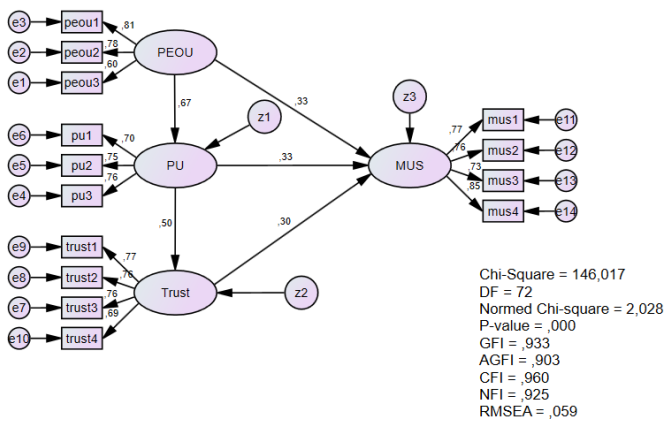


Fig. 2 The structural model

4.4. Discussion and Business Implications

This study uses five hypotheses to determine the impact of PU, PEOU, and trust on mobile Web site satisfaction in Indonesia. From the statistical results, all the proposed hypotheses proved to be positive and significant.

First, to increase PEOU, the use of a mobile site must become more accessible. According to most literature, convenience is considered the first variable for user satisfaction. From the descriptive statistical analysis, the research target population almost all agree that the cellular services provided in Indonesia (Telkomsel, XL, Oredo, Tri) are easy to use. Apart from being easy to use, cellular operators also offer many internets quota-purchasing programs needed by consumers. Furthermore, in this study, PEOU was found to be a significant predictor of PU. The phenomenon of active use of a mobile device lately causes the convenience factor always to consider the comfort factor of a device's screen, more spacious storage, access speed, and response speed. If these factors are not observed, it will harm user experience on overall satisfaction [15, 19]. Mobile marketers must understand the importance of the convenience of the services provided. Thus, the findings of this study are consistent with previous related studies on electronic commerce and mobile commerce.

Second, this study shows that the relationship between PU and mobile phone user satisfaction is significant. In addition, PU was also shown to be a major predictor factor for trustworthiness. Cellular technology developing continuously today will place PU as one of the fundamental factors in planning an innovation [17, 47]. Furthermore, to improve PU, marketing managers can consider that each new feature of mobile devices and service providers should make users feel comfortable conducting transactions, obtaining the required information more easily. In addition, PU is also widely used as a reference in several surveys such as cellular payments, cellular

trade, cellular data services, e-CRM [7, 12, 25, 49]. From the results of this study, it is hoped that it will inspire further research to explore the potential use of mobile commerce applications in many organizations.

Third, mobile commerce vendors must be honest, care about customers, and not be opportunistic to increase trust. [23] mentioned that trust existed before the customer had a real experience on the mediating channels. Consumers generally receive information from different types of media. Word-of-mouth is one of the methods used by the consumer to build trust towards the e-seller. The consumers can also reach the re-seller through a website where technology becomes a mediating channel. Web site identification and traffic flow are essential to the existence of e-commerce. In addition, trust acts as the base of a long-term relationship in electronic environments [13]. The relationship between trust and e-commerce is represented in consumer's daily life and the significance of trust. Many organizations use e-commerce web site to approach their target customers [23, 58, 77]. Issues like negative publicity and susceptible organizational behaviors are contra-productive to consumer expectations and ruin the corporate image [21, 58].

Online and mobile transactions are currently tied together in an electronic commerce provision, requiring buyers to provide sellers with sensitive personal information such as telephone numbers or credit card details [1, 66]. This can all be understood in determining the critical role of trust in e-commerce. From the results of the study, the relationship between trust and satisfaction was significant. Thus, trust can be used to predict customer satisfaction among mobile phone users. The trust factor also plays a role in determining their target market and allocating a reasonable marketing budget to convince users that they are honest and trustworthy.

Furthermore, trust in e-commerce research is closely related to privacy. Privacy is one of the main concerns when dealing with IT-based services. For instance, some customers may look at the internet as an insecure environment and worry that someone will access their personal financial information [50]. Privacy concerns may alter customers' judgment towards IT-based services. These findings are consistent with the previous related research in e-commerce, especially about online shopping. The findings are also consistent with a present study conducted by [85]. Currently, as the non-face-to-face contact culture due to COVID-19 is extending through life, the individuals trusting frequency on mobile phones is augmenting regardless of age. The frequency of usage in the condition has a significant effect on satisfaction. It can be understood that what came out resolves the joy of respondents' lives with their mobile phones. Therefore, it can be mentioned that the result is tantamount to the previous research that recognizes the

value of the mobile phone more highly through practical and situational use in the frequency of usage of the mobile phone. As a result, cell phone use time per day was significantly increased compared to before and after COVID-19.

5. Conclusion

The relationship between all research antecedents and dependent variables was found to be significant. Consumer needs for cellular phone products need to consider various consumer tastes and preferences. In designing a product during an increasing pandemic, the suggested model can help in increasing consumer satisfaction. This means that customer satisfaction will increase if PU, PEOU, and trust formation are appropriately managed. In turn, the planned implementation of PEOU, PU, and trust will meet user expectations, and users will be happy with their overall experience using mobile services.

The scientific novelty in this study is during the COVID-19 pandemic since the government of Indonesia imposed restrictions on public mobility and gathering. Shops and groceries come to consumers' homes. They come to our home, so does function for work, education, and business. This is contrary to the flow for work, education, health, and purchasing and consumption. In-home delivery of everything, including streaming services such as cable television, YouTube, Netflix, is breaking the ordinary habits of physical places. It is also enhancing convenience and personalization in consumer behavior. We need to empirically study how "store comes home" affects consumers' impulse buying and planned vs. unplanned consumption during the COVID-19 pandemic. Thus, the use of mobile gadgets is inevitable. Therefore, the use of the gadget of the mobile phone plays a role not only for communication but also for work from home, school from home, and an online business. This phenomenon is unimaginable during the ordinary time before the covid-19 pandemic.

The study was conducted during the time of the COVID-19 pandemic. The data was gathered by online questionnaires, while in Indonesia, people were not accustomed to having online surveys, and the success rate of returned questionnaires was quite low.

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