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The Development of a Web-Based Strategic Pricing Application to Support the Sustainability of Creative-Based SMEs

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ABSTRACT

This study analyzes the theoretical and practical effects of Perceived Usefulness and Perceived Ease of Use on Attitude Toward Using and Behavioral Intention to use the web-based pricing application Mersyprice, based on the Technology Acceptance Model theory. Mersyprice is a web-based application to support strategic pricing for Small and Medium Enterprises (SMEs) in the creative sector. Data was collected through an online Focus Group Discussion (FGD) using Zoom to introduce the use of Mersyprice in supporting strategic pricing for creative SMEs. Participants then completed a questionnaire using a Google form. Data analysis was carried out in 2 stages. The first stage, to answer theoretical objectives, Structural Equation Modeling was used. While the second stage, to answer practical purposes, the Analytical Hierarchy Process was used. The firststage of analysis showed that Perceived Usefulness and Perceived Ease of Use have a significant impact on Behavioral Intention to use the Mersyprice application via Attitude Toward Using it. Respondents considered that the "Ease of Use" variable was more important. The second stage of analysis revealed that 47% of creative SMEs intend to use Mersyprice, while 35% are considering using it. It can be concluded that Mersyprice is useful in supporting strategic pricing by creative sector of SMEs. For future research it is important to develop the Mersyprice in a more user friendly so that it can be used more widely.

1. INTRODUCTION

The President of Indonesia, Joko Widodo, was annoyed by the actions of online business actors who apply predatory pricing which is considered very unfair and has the potential to bury SME's businesses [1]. In addition, Indonesian SMEs also face "classic" problems, namely 1) not being ready to enter the digital era due to limited human resource capabilities and 2) not having sufficient competence in accounting and finance [2]. Due to the lack of accounting and financial skills, the phenomena that often appear are 1) unable to prepare financial reports and as a result they do not have access to formal financial institutions, particularly banks [3]; and 2) do not have sufficient and adequate data for decision making, including decisions in determining the selling price of products [4]. As a result, SME's products are inferior to similar products sold online and imported products, especially from China [5].

This condition is certainly very worrying considering that the role of SMEs is very important as a contributor to 62% of Indonesia's GDP [6]. In more detail, what sector of SMEs is the most significant contributor to the Indonesian economy? Then, the answer is Creative Sector. The contribution of this sector can also be seen from its consistency in increasing exports since 2013 and from its important role in reducing unemployment [7]. In general, there are 17 creative sectors [8]. However, according to data from the Ministry of Tourism and Creative Economy, the 3 largest contributors to Indonesia's GDP are culinary, fashion, and craft [9]. Even since 2017, Indonesia has been in the top 3 in the world with the highest creative economy contribution to its national GDP.

During the COVID-19 pandemic, SMEs, including those from the creative sector faced very bad conditions. Data relating to layoffs due to the COVID-19 pandemic [10] are as follow Figure 1:
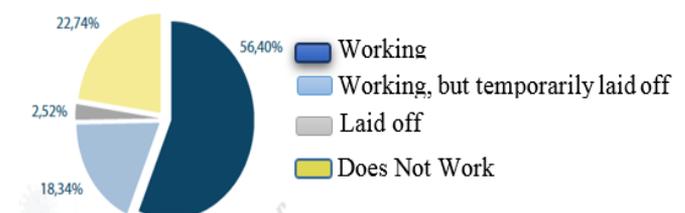

Figure 1. Data from the workforce during the COVID-19 pandemic

From this data, 2.52% of Indonesian workers were laid off and 18.34% are still working but were laid off. Moreover, in 2020 the Indonesian Institute of Sciences (LIPI) and one of the

universities in Indonesia predicted that around 25 million Indonesians will lose their jobs due to the pandemic. In detail, in terms of age, 67% are aged 18-24 years, from the sector side, the hospitality/catering sector is 85%, followed by the transportation sector at 82%, the textile/garment sector at 71% and the food/beverage sector at 69%. In terms of geography, the largest number occurred in the province of Bali.

From the informal observations, during the COVID-19 pandemic workers who are laid off generally open businesses individually or in partnership to survive because it is not easy to find a new job. Even, the local government encourages and facilitates laid-off workers to open businesses. Thus, small businesses (SMEs) tend to increase and an interesting phenomenon is, they are managed by young people. In addition, many new entrepreneurs are doing business as a producer as well as resellers.

The emergence of young entrepreneurs must be supported so that they can survive during the pandemic, and continue to grow even though the COVID-19 pandemic is over. Digitalization is one of the breakthroughs and can be used as a mainstay to maintain the sustainability of SMEs [11, 12]. In addition, there are also more and more phenomena where individuals (housewives, students, or others) do business as resellers of various products, especially culinary, fashion, and other lifestyle products. This condition will be a solution in creating jobs and reducing unemployment, not only during the Corona pandemic but also potentially until the pandemic is over.

Considering the SMEs phenomenon, it is necessary to find a breakthrough in elevating the SME to become a more competitive sector in various aspects, including in terms of determining selling prices. For business actors in general, pricing is very important. However, determining the selling price is not an easy decision for SMEs [13]. It is a common phenomenon in SMEs, pricing is done in ways that are not objective and are not based on accurate data [14]. Therefore, assistance and training are needed, and what is more important is to build awareness of the quality of the selling price [15].

Due to the importance of better understanding of selling price determination, previous research (which was applied research) has been successful:

(1).   To introduce the concept of determining the selling price based on the concept of the Strategic Pricing Model, and empirical evidence on the positive perception of SMEs, that it is a useful model. The strategic price is a useful model because it considers the price of competitors' products to increase the quality of the selling price [4].

(2).   Create a simple application for a web-based Strategic Pricing Model. The application is named Mersyprice or Merdeka Easy Pricing that useful in supporting the determination of strategic price [16].

Continuing previous research, this research aims both theoretical and technological. The theoretical objectives of this research are to analyze the effect of Perceived Usefulness (PU) and Perceived Ease of Use (PEU) on Attitude Toward Using (ATU) and Behavioral Intention in Using (BIU) Web-Based Mersyprice based on the theory of Technology Acceptance Model (TAM). Whereas Technological Objectives was to test and analyze the "product acceptance" of the Mersyprice application. The overall results of this study will contribute to the development of the theory of TAM. This research also contributes to the field of technology, specifically the development of digital accounting to support the digitization of SMEs [17].

The novel of this research can be explained as follows:

(1).   The first theoretical novel deals with determining strategic prices. This concept is a relatively new model for determining the selling price. The novelty of this model also comes from the inclusion of product positioning factors throughout the product lifecycle and competing products price.

(2).   The practical or technological novel is then accommodated in the form of software called Mersyprice which is a website-based application. With this application, it is hoped that SMEs will be assisted in the process of determining digital-based strategic prices. In the industrial 4.0 era, especially during and after the COVID-19 pandemic, digitalization is a necessity [18].

This novelty is based on the fact that several inventions for determining selling prices have been made by previous inventors for products other than the creative industry. For example, Zhang et al. [18] succeeded in creating an application for determining the optimal selling price for retail products sold in E-Commerce by considering the payment model. Cheng et al. [19] also built a model for determining the selling price of Airbnb services by considering market conditions, quality, and risk sensitivity [20]. Another model developed by Allameh and Saidi-Mehrabad [21] relates to product pricing which develops the Stackelberg game for setting prices for biodiesel products that consider environmental element.

Currently, it is important to develop a pricing model due to increasingly intense competition. Lee [22] developed pricing game models involving multiple IoT providers and analyzes both a non-cooperative game and a cooperative game. Developed a model to evaluate the appropriateness of software prices and thus to support the negotiation and decision process regarding suppliers [23, 24]. Thus, it seems important to develop pricing models according to the type and characteristics of the commodity or product.

2. THEORETICAL REVIEW

2.1 Technology Acceptance Model (TAM)

The main theory of this research is the Technology Acceptance Model (TAM) [25], TAM theory, the user's intention in using the system is related to 3 factors, namely PU, PEU, and ATU (attitude toward using). Furthermore, Mathieson [25] concluded that the three variables are the main determinants of whether the user will refuse or accept using the system [26]. A strong correlation between behavioral intention and perceived usefulness will determine the intention of using the system. On the other hand, perceived ease of use has a small but significant effect on behavioral intention. It then determines the user's decision to use or not to use the system.

2.2 Strategic pricing

Strategic Price is a Pricing technique that focuses on the use of information about a competitor, like competitors' reactions to price changes, price elasticity, economies of scale, and experience. Meanwhile, according to Blocher [27], strategic pricing is the process of determining the selling price that considers two factors, namely the cost lifecycle and product lifecycle. Cost lifecycle is a series of activities within the organization, from research and development activities, design, production, marketing/distribution, and customer service, as

shown in Figure 2 below.

Based on the figure, upstream activities are a series of activities consisting of research/development and design activities, while downstream activities include marketing/distribution activities and customer service. Meanwhile, lifecycle costing is a method used to identify and monitor product costs throughout the cost lifecycle. The traditional system only takes into account costs in the third stage, namely the production stage.

Product lifecycle is a product life cycle that starts from the introduction, growth, maturity, and decline stages and is then withdrawn from the market, as shown in Figure 3. In determining strategic pricing based on the product lifecycle, management must pay attention to the position of the product, the price is set according to its position in the life cycle, with the following details [28].
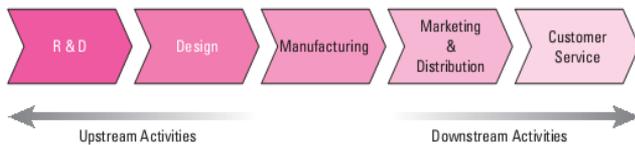

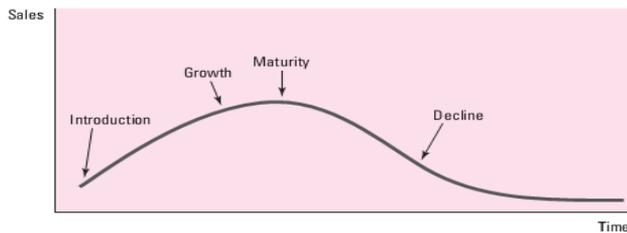
Figure 2. Cost lifecycle [28]

Figure 3. Product lifecycle [28]

(a). In the introduction stage, prices should be set higher to cover design, research/development, and marketing costs.

(b). Growth stage. At this stage, competition begins to increase because similar products in the market are also increasing, so prices still have to be set high.

(c). Maturity. At this stage the price follows competitors, in other words, the company begins to implement a price taker policy, no longer as a price setter.

(d). Decline, at this stage the price is lowered lower. To avoid losses, management should focus on cost efficiency downstream and upstream.

The advantage of this strategic pricing is that this approach considers all costs throughout the cost lifecycle and the markup percentage can be directly linked to the desired level of profit based on the position of the product throughout the product lifecycle. The next stage is to enter the selling price of similar products from the online shop. The result of this process is the recommended strategic price. Thus, the strategic pricing concept introduced in this study combines the concepts [29].

2.3 Creative industry and SMES creative sector

The creative industry, according to the Ministry of Trade is an industry that originates from the use of individual creativity, skills, and talents to create prosperity and employment through the creation and utilization of the creative power of the individual. According to the Ministry of Tourism and Creative Economy of the Republic of Indonesia, the government has determined 17 creative sub-sectors. It is important to develop a creative industry because of its contribution to economic improvement and positive social impact [30].

Meanwhile, creative sector SMEs are SMEs whose business sector is engaged in the creative industry sectors or related to the creative industry. According to Indonesian Government Regulation No. 7/2021, SME business criteria are based on capital or sales volume [27]. Based on the regulation, the company is categorized as small if the capital is less than IDR 5 billion and it is categorized as a medium if the capital is around IDR 5 billion to IDR 10 billion. In terms of the criteria based on sales, the criteria are small if the turnover is up to IDR 15 billion and the criteria are medium if the turnover is around IDR 15 billion to IDR 50 billion.

Previous research found empirical evidence that SMEs in the creative sector have not implemented an adequate accounting system for decision-making [16]. However, research on SMEs' perceptions of the strategic pricing model shows that this model is useful because it improves the quality of the determined selling price. Unfortunately, SMEs still view accounting as difficult to learn and require special skills [16].

2.4 Mersyprice application

The Merdeka Easy Pricing (Mersyprice) application is a computer application/program to assist Small and Medium Enterprises in determining the final selling price of a product by considering competitors' selling prices. Consideration of competitors' selling prices is very important to include so that the prices obtained are competitive, not too far from competitors, either too high or too low. The final result or the amount of the selling price to be used is entirely the decision of the owner or business actor, which often requires subjective considerations.

The Mersyprice application which is the result of previous research is Web-based so it can only be run using a Personal Computer (PC). To use this application the user must access it via a browser, using Firefox or Google Chrome. Designed to be easy to operate, with menus and commands using Indonesian language and with terms that are easily understood by people who are unfamiliar with accounting, this application can be used by SMEs both as producers and individual entrepreneurs who do independent business (freelance) or resellers. The stages of operating the applications are as presented in the figure below (Figure 4).
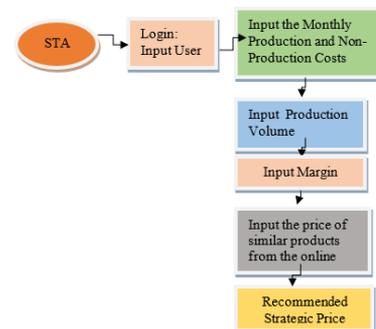

Figure 4. Stages of using the mercy price application

The following is an explanation related to the use of Mersyprice applications.

1. Start and login

The Mersyprice application is website-based. To use this application the user must access it through the browser, using Firefox or Google Chrome, however, it is recommended that users use the latest browser. After the program is opened and installed the URL address, the first page will appear where the user must enter a username and password and other data.

2. Input monthly production and non production costs

a. The process that must be done by SMEs as a producer or manufacturer.

At this stage, production costs last month were included. The available menus include Enter data about monthly costs. Users enter the cost of the costs incurred along the cost lifecycle. Based on the study [16], the costs that are generally issued by SMEs for upstream activity are design costs, production costs, including raw materials, direct labor, and overhead costs [4]. The cost of downstream includes the cost of marketing, distribution, and service after-sales. The result of the process is a Table or List of Monthly Cost Data. In addition, it is also equipped with a menu Edit Monthly Cost and Remove Monthly Cost. For SMEs who are producers, the output of this stage is the total cost from downstream, production, and upstream for one month. Assuming there is no inventory of finished products and products in process, then the data will produce data on the cost of products.

b. The process is carried out by reseller business actors.

Enter the data of total purchase for each product item purchased, including the purchase price (according to the purchase invoice) plus other costs, such as transportation costs, porter fees, shipping costs, and other costs. From this process, the cost of the product will be obtained.

3. Input production volume

The process for each application user actor is as follows:

(a). For producer SMEs, at this stage enter the number of production plans for one month. Then the application will process the calculation of the cost per unit.

(b). For resellers, the volume inputted is the total product purchases of each item for one month. The product cost per unit is obtained by calculating: the total purchases obtained in stage 2a divided by the total purchases entered.

4. Input margin

At this stage, the user enters the desired profit margin whose amount is adjusted to the position of the product in the product lifecycle following the Blocher concept [28]. The application of this concept requires a good understanding of business actors such as producers and resellers regarding the position of their products. If the business actor believes that the product is newly launched (which means it is in the introduction and growth stage), then the margin can be set high, for example, up to 35-45% of the cost of goods. Or even up to more than 50% if it is still possible. When the product is in the maturity stage, SME owners should start lowering prices by lowering their margins, for example to 20%. Margins must be lowered to very low levels if the product is in a decline stage. The determination of the margin can be applied by both SMEs as producers and resellers.

5. Input prices for similar products from on-line and of-line shops

At this stage, users identify the prices of competitors' products in online and off-line stores. The price of the selected product can come from one or more competitors and at the same time can be selected based on the higher, lower, and almost the same price. This software is able to accommodate 6 prices for competing products that can be taken from 6 big unicorns in Indonesia: Tokopedia, Bukalapak, Lazada, Zalora, JD ID, and Shopee. If the price of a competitor's product is from an offline store, the price is entered manually.

6. Recommended strategic price

After stages 1-5 have been implemented, then at the final stage, the recommended selling price will be obtained. The calculation process in the software can be explained from the following illustration. For example, the process of determining the selling price is being carried out by an SME owner who is a producer who has just released a new product that is not widely available in the market. According to the owner, this means that the product's position in the Product Lifecycle is in the introductory stage, therefore the margin is set at 45% of the cost of goods. Similar products are only available in 4 online stores, namely A, B, C, and D stores. Sales will start in August 2020, the production process has been going on for July 2020. The production volume is planned to be 1000 pcs while the total production cost for that month is IDR 2,650,000.

The simulation process for calculating strategic prices in the application can be seen from the calculations below (Table 1):

Table 1. The simulation process for calculating strategic price

In Rupiah (IDR)	
Cost per product	2,650
Margin (45%)	1,193
Price per Unit (Initial price from SMEs) = A	3,843
Prices of similar products in the online shop:	
Price in the online shop A	3,750
Price in the online shop B	4,000
Price in the online shop C	4,500
Price in the online shop D	4,100
Average price of competitor's products (B)	4,088
Suggested Strategic Price (A+B)/2	3,965

From the illustration, the recommended selling price is IDR 3,965. For producer, the main record needed is production costs which is also available in Mersyprice software. As for resellers, the price included as the cost per unit is the cost per unit consisting of the purchase price of the product plus other costs.

The strategic price that has been obtained from this application can be used immediately, it can also be changed (increased or decreased) according to the consideration of the SME's owner. For example, if the owner intends to provide a discount, then the price can be lowered. Alternatively, the price may be increased if the purchase is a special order.

Based on the theoretical explanation above, in this case the TAM theory and the implementation of the use of the Mersyprice application to support strategic pricing, the formulation of the research hypotheses are as follows:

H1: PU effects ATU
H2: PEU effects ATU
H3: PU effect BIU
H4: PEU effects BIU
H5: ATU effects BIU
H6: PU effects BIU through ATU
H7: PEU effects BIU through ATU.

3. RESEARCH METHOD

3.1 Variables and variable measurement

(a) Independent variable

The independent variables consist of PU (X1) and PEU (X2). PU is the level of confidence of SME's owner in the benefits of using the application and improving performance. Meanwhile, PEU is the belief of SME's owner that Mersyprise is easy to use and to eliminate the burden of thought or stress physically and mentally.

(b) Intervening variables

The intervening variable of this research is Attitude Toward Using, namely positive or negative feelings or attitudes of SME owners towards the Mersyprice application. According to Mathieson [25], the attitude factor is a very important result because it will later lead to an intention to use it [31].

(c) Dependent Variable

The dependent variable is BIU, which is the extent to which SME owners consciously plan to use or not use the Mersyprice application in determining the price of their products. Measurement of all variables using a Likert scale with answer choices 1- strongly disagree until 5 = strongly agree. Question items in the questionnaire refer to Davis et al. [24], Details of the questionnaire are presented in the Appendix 1.

3.2 Data collection process

An online Focus Group Discussion (FGD) using Zoom was held with the main agenda was to introduce Mersyprice application. A brainstorming also held to provide an understanding of the strategic pricing model as well as the process of determining prices along with its benefits of improving price-quality. A total of 200 participants attended this FGD. Since most of the participants were SME owners who were unfamiliar with accounting, the material and concepts of strategic pricing models were presented in simple language instead of using accounting jargon. Immediately after the brainstorming was ended, the questionnaires were submitted online (using google form) to the FGD participants. The questions in the questionnaire refer to the TAM theory with regard to variables: PU, PEU, ATU, and BIU (Appendix 1). Participants were asked to fill in online and guided by the researcher and the team. The answers sent by the participants were immediately tabulated in Excel format which is ready for data processing.

3.3 Data analysis

Data analysis was carried out in 2 stages:

(1). Data analysis in Phase 1 was conducted to find empirical evidence for the first objective (theoretical objectives) about the extent to which SMEs intend to use the Mersyprice application using Structural Equation Modeling (SEM). This analysis aims to obtain empirical evidence about how much SMEs intend and plan to use Mersyprice applications based on TAM theory.

(2). Data analysis in Phase 2 was conducted to find empirical evidence for the Technological objective, namely to test and analyze the "product acceptance" of the Mersyprice application using Analytical Hierarchy Process. The second stage of analysis was also carried out for robustness test purposes.

4. RESULT OF THE RESEARCH

A total of 200 questionnaires were distributed, 160 questionnaires were answered online and feasible for further processing. Results of data processing showing that the Pearson Correlation value is greater than 0.5 with a significance value of 0.000 so that the question items in the questionnaire were valid. Meanwhile, the reliability test of Cronbach's Alpha showed that the value was greater than 0.7, so it can be stated that all questions were reliable. Classical assumption test: normality, heteroscedasticity, and multicollinearity resulted in no problems.

4.1 Characteristics of respondents

In this section, data about the characteristics of the respondents are presented. By gender, 55% of respondents were men, and 45% were women. Concerning the education level of the respondents, the first category is respondents with basic to advanced education, namely the level of junior high school to senior high school by 47%. The second category is respondents who study at the University at the Diploma and S1 level by 51.25% and the third category is S2 graduates by 2%. As for the type of business, the following data obtained Table 2:

Table 2. Respondent's type

No	Type of business	Percentage
1	Batik, products from batik and embroidery	18.13
2	Crafts and handicrafts	18.75
3	Food and Baverage	49.38
4	Garments and other fashion products	9.38
5	Furniture and similar products	2.5
6	Marketing of creative products	1.88

From the table, most of the respondents engaged in the food and beverage business, followed by fashion and handicraft businesses with almost the same percentage. Furthermore, data on the length of time the respondents have run their business was presented. The following table (Table 3) presents data on the length of time the respondents in running their business:

Table 3. The length of business

No	Long in Running the Business	Percentage
1	1-2 years	21.25
2	3-4 years	22.5
3	5-6 years	16.25
4	7-10 years	21.25
5	>10 years	18.75

The Table shows respondents who have been in business for 1-2 years are 21.25%. A business that runs for 1-2 years is new. it is possible, in this percentage are entrepreneurs who have just emerged during the COVID-19 pandemic (considering that this survey was conducted during the corona pandemic period).

4.2 Descriptive analysis

An overview of the research variables consisting of Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, and Behavioral Intention to Use is presented in the

following descriptive statistical table:

Table 4. Descriptive statistics of research variables

Variables	Min	Max	Mean
PU	3	5	4.1
PEU	3	5	3.8
ATU	3	5	4.2
BIU	3	5	3.9

From Table 4, the minimum value of the respondent's answer is 3, and the maximum is 5, which means that the Mersyprice application is considered quite useful to very useful. The average value of 4.1 means that most respondents perceive this application to be very useful. While the respondents' answers relate to ease of use, the minimum value is 3, and the maximum is 5, indicating that the Mersyprice application is easy enough to very easy to use. However, when viewed from an average of 3.8, the average respondent considers this application easy to use.

Regarding the variable of Attitude Toward Using, the minimum answer is also 3 and a maximum of 5 indicates a good enough (positive) to very good (positive) attitude towards this application. The average for this answer is 4.2, indicating that most respondents are very positive about this application. Finally, for the answer about behavioral intention to use, the answer is at least 3 3 and a maximum of 5, and an average of 3.9 indicates that the respondent is interested or there is an intention to use the Mersyprice application.

4.3 Data analysis phase 1: Hypothesis testing

Prior to the regression analysis, the assumptions tested consisting of normality, heteroscedasticity, and multicollinearity. From the normality test, the data obtained is normally distributed, there is no heteroscedasticity, and multicollinearity with no problems. Structural Equation Modeling (SEM) is used to test the effect among variables with the following structural equation:

a. $Y1 = \beta1\ X1 + \beta2\ X2 + \varepsilon i$ (Substructure 1)

b. $Y2 = \beta3\ X1 + \beta4\ X2 + \beta5\ Y1 + \varepsilon i$ (Substructure 2)

4.4 Test the direct and indirect effects

The following figure presents the results of the data processing of the two sub-structures (Appendix 2).
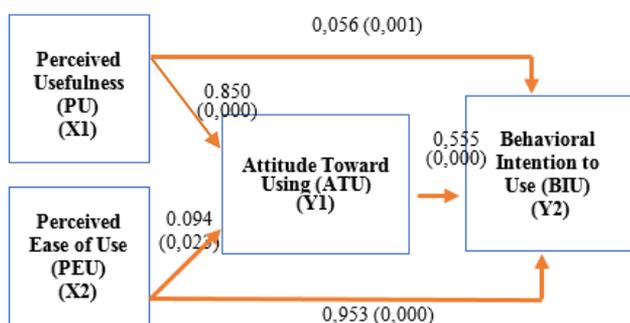

Figure 5. Result of analysis using SEM

From Figure 5 above, there is a positive and significant

direct influence of PU and PEU on ATU and BIU and between ATU and BIU. This is based on the coefficients that are entirely positive, and the overall significance is less than 0.05. This means that hypotheses 1-5 are accepted. Below is the indirect effect of variables (Table 5):

Table 5. Indirect effects among variables

Relationship Among Variables	Indirect Effect	Direct Effect	Total Effect
1 $X_1 \to Y_1 \to Y_2$	0.85 * 0.555 = 0.472	0.056	0.472 + 0.056 = 0.528
2 $X_2 \to Y_1 \to Y_2$	0.094 * 0.555 = 0.052	0.953	0.052 + 0.953 = 1.005

These results show that PU affects BIU through ATU using. This can be seen from the total influence coefficient of 0.528, which is greater than the direct effect, 0.056. The same results are the effect of PEU on BIU through ATU. This also means that hypotheses 6 and 7 are accepted.

These results also show that the total coefficient is 1.005, which is greater than 0.052. More in-depth analysis shows that the total coefficient of the effect of PEU on BIU through ATU is 1.005, which is greater than the total effect of PU on BIU through ATU, which is 0.528. It means, that the EU is a factor that is considered more important by users.

4.5 Data analysis phase 2: Robustness test

The second stage of data analysis was carried out for the robustness test as well as obtaining empirical evidence about product acceptance of the Mersyprice application. The AHP was used to find respondents' considerations about the quality of Strategic Price Produced by Mersyprice through the following criteria: less competitive, competitive, and very competitive. Strategic price considered competitive if SME considers that the strategic price recommended by Mersyprice can compete with the selling price of competitors' products, but SME still gets an adequate profit. After the considerations are set, the next step is to determine an alternative based on the Consistency Ratio (CR) value (Appendix 3). The results obtained are in the following figure (Figure 6):
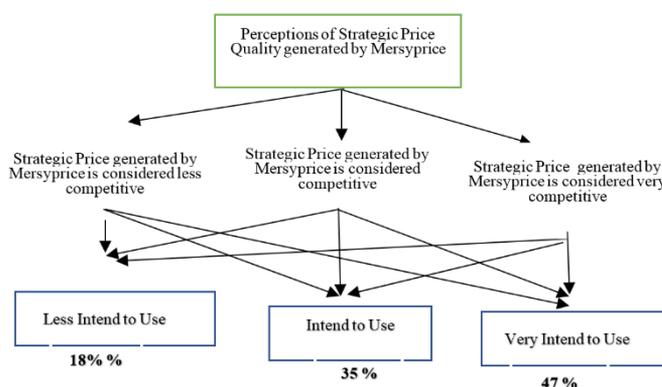

Figure 6. Results of AHP analysis

These results show that even though the price simulated in the Mersyprise application was still fictitious, it shows that

SMEs intend to use as much as 35% and very intend to use as much as 47%. These results also indicate that the Mersyprice application is perceived useful in supporting the strategic pricing process. Of course, these results also support the results of data analysis using SEM.

5. DISCUSSION

The development of strategic web-based pricing applications can be an effective solution to support the sustainability of creative-based SMEs. In the face of increasingly tight and dynamic competition, it is important for SMEs to have a proper and effective pricing strategy. The web-based strategic pricing application can help SMEs determine competitive pricing and optimize their profit margins. The application features can help SMEs analyze competitor pricing data, calculate production costs and profit margins, and determine pricing strategies based on market conditions, target audiences, and business objectives. The application can assist SMEs in improving pricing effectiveness and efficiency, and optimizing their profits.

With the availability of this web-based strategic pricing application, it is hoped that creative-based SMEs can have an easier and more effective way of facing market challenges. Moreover, they can improve their competitiveness in the market and strengthen their business position. The research collected data from SME respondents in the creative sector, and the result shows that they have a good perception of the Mersyprice application. Many of the variables have high mean scores ranging from 3.8 to 4.2. Additionally, a positive attitude toward the Mersyprice application has a significant impact on the intention to use it. From the second stage of testing, it was found that 35% of respondents intend to use it, while 47% are strongly willing to use it. Therefore, approximately 80% of the respondents intend to use the Mersyprice app.

The Mersyprice application is an excellent example of a web-based strategic pricing application that can help SMEs compete in the market. The features of the application can assist SMEs in analyzing competitor pricing data, calculating production costs and profit margins, and determining appropriate pricing strategies based on market conditions and business objectives. By using the Mersyprice application, SMEs can obtain accurate and real-time information about market conditions and competition. This will help SMEs determine competitive pricing and increase their effectiveness and efficiency in pricing, as well as optimizing their profit margins. Ultimately, this can help SMEs strengthen their business position and improve sustainability in an increasingly competitive and dynamic market.

In conclusion, web-based strategic pricing applications are an innovation in the marketing industry with great potential to improve pricing effectiveness in business [32], who revealed that top 100 US retailers use web-based strategies to improve their business processes, including pricing strategies [33]. Additionally, research findings from Sharma and Sheth [34] show that web-based marketing will become a revolution in marketing thought and strategy in the future. The development of web-based strategic pricing applications can help businesses determine the right price for their products more accurately and efficiently through comprehensive and integrated data analysis. Therefore, this development can be an effective strategy for businesses to stay competitive in an increasingly competitive market.

The development of web-based strategic pricing applications can help businesses determine the right price for their products more accurately and efficiently, using more comprehensive and integrated data analysis [35] also revealed that this application can help management determine the desired profit target using break-even analysis, making it easier to determine the product price.

In addition, web-based sentiment analysis can also be used in pricing, as shown in the study [33]. In the study, researchers used web-based sentiment analysis to predict future oil prices using data from social media and news. This shows that web-based sentiment analysis can be a useful tool in enhancing pricing strategies.

In conclusion, web-based strategic pricing applications have great potential to help businesses improve pricing effectiveness. The use of this application can also help management determine the profit target more accurately and efficiently, as well as improve their skills in making decisions based on more comprehensive data analysis. Therefore, the development of this application can be an effective strategy for businesses to face increasingly tight market competition.

Therefore, further development of the Mersyprice application is needed to ensure that it remains easy to use for users with different levels of education and skills. Additionally, it is essential to promote the application to increase its awareness and usage by more creative-based SMEs, thereby enhancing the competitiveness of their products.

According to the two-stage data processing results, based on the perception of SME respondents in this research, the Mersyprice application is useful in supporting strategic pricing. The recommended price generated by the application is considered competitive, which implies that the selling price of their products can compete with other products' prices while still achieving the desired profit. Thus, they can compete and earn a profit at the same time. Additionally, the data processing results also indicate that ease of use is an important factor to consider. This can be linked to the education level of SMEs, which is mostly at the intermediate level (reaching 47% according to descriptive data). Therefore, Mersyprice needs to be further developed into an application that is easy to use by all SME users regardless of their educational background.

6. CONCLUSIONS

Strategic Pricing is considered a useful pricing model because it accommodates the product's position in the product lifecycle as well as competitors' selling prices. The Mersyprice application is also useful in assisting the process of determining strategic pricing. Based on the result of data processing, respondents consider the ease of use of the application to be more important.

Based on the results of this study, where the "perception of ease of use" is more important to the user, the following research is to develop a user-friendly Android-based Mersyprice application. The application will then be uploaded on the Google Playstore so that it can be used more widely. Hopefully, this application will be useful in helping to determine the selling price as well as in providing the financial data needed to manage SMEs. It is hoped that the results of this research will be a solution not only during the COVID-19 pandemic but also later in the new normal era following the recommendations of the Asian Development Bank [36].

The limitations of this research include, FGDs in the context

of simulating the Mersyprice application were carried out online so there was not enough feedback from the participants. In addition, due to limited time and facilities, participants did not have the opportunity to try the Mersyprise application directly but only received explanations from the presenter. In the future, trials of the Android-based Merseprice application should involve participants trying it directly so that adequate feedback will be obtained for improving the application.

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APPENDIX

Appendix 1. Questionnaire

Statements in the questionnaire with answer choices: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree

No	Statement
Perceived Usefulness of the Mersyprice Application	
1	The Mersyprice application makes it easy to determine the selling price.
2	The Mersyprice application makes the process of determining the selling price of products faster.
3	Mersyprice applications can increase business productivity.
4	The Mersyprice application improves the accuracy of selling prices.
5	Mersyprice application is useful in improving the company's performance through the quality of the selling price.
Perceived Ease of Use of the Mersyprice Application	
1	Mersyprice application is easy to operate.
2	There are no obstacles in using the Mersyprice application.
3	The Mersyprice application can be applied without being accompanied by an IT expert.
4	Mersyprice application steps are easy to understand.
5	If an error occurs in the use of Mersyprice, it is easy to make corrections.
Attitude Toward in Using Mersyprice	
1	Using the Mersyprice application is a good idea.
2	Using the Mersyprice application is quite fun.
3	The use of the Mersyprice application will make other people also interested in using it.
4	I like using the Mersyprice application.
5	There are almost no obstacles in using the Mersyprice application.
Behavioral Intention to Use Mersyprice Application	
1	I don't mind using the Mersyprice application.
2	I intend to increase the frequency of using the Mersyprice application.
3	I am interested in using the Mersyprice application.
4	Using the Mersyprice app is part of the way I express my personality.
5	I am interested in using the Mersyprice application to manage my business in the future.

Appendix 2. Results of the Regression (SEM)

ANOVA[b]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	748.434	2	374.217	331.820	.000[a]
	Residual	177.060	157	1.128		
	Total	925.494	159			

a. Predictors: (Constant), x2, x1
b. Dependent Variable: y1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.987	.729		4.097	.000
	x1	.791	.038	.846	20.556	.000
	x2	.083	.036	.094	2.293	.023

a. Dependent Variable: y1

ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	354.900	1	354.900	70.174	.000[a]
	Residual	799.075	158	5.057		
	Total	1153.975	159			

a. Predictors: (Constant), y1
b. Dependent Variable: y2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.534	1.545		4.230	.000
	y1	.619	.074	.555	8.377	.000

a. Dependent Variable: y2

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1116.140	2	558.070	2.316E3	.000[a]
	Residual	37.835	157	.241		
	Total	1153.975	159			

a. Predictors: (Constant), x2, x1
b. Dependent Variable: y2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.169	.337		.503	.616
	x1	.058	.018	.056	3.285	.001
	x2	.935	.017	.953	55.933	.000

a. Dependent Variable: y2

Appendix 3. Result of Data Processing Using AHP

Criteria Analysis: Less Competitive, Competitive, and Very Competitive.

The conditions based on survey results are:

   a. Competitive is 4 times more important than less competitive.

   b. Very competitive is 3 times more important than less competitive.

   c. Competitive is 2 times more important than very competitive.

Furthermore, with pairwise comparison, the level of importance of one criterion compared to another can be expressed as follows:

	The Strategic Price produced by Mersyprice is considered less competitive	The Strategic Price generated by Mersyprice is considered competitive	The Strategic Price produced by Mersyprice is considered very competitive
The Strategic Price produced by Mersyprice is considered less competitive	1	1/4	1/3
The Strategic Price generated by Mersyprice is considered competitive	4	1	2
The Strategic Price produced by Mersyprice is considered very competitive	3	1/2	1

The next step is to square the matrix obtained from the pairwise comparison above and obtain the quadratic result as follows:

3	0.666667	1.166667
14	3	5.333333
8	1.75	3

Next, calculate the eigenvector and obtain the result:

0.12
0.56
0.32

The next step is to find the Consistency Ratio (CR) with the formula:

$$Ax = \lambda_{max}X,$$

where, X is the Eigenvector. From the calculation the value of λ_{max} obtained was 3.018339114.

So, by using the formula $CR = \frac{CI}{IR} = \frac{3.018339114 - 3}{3 - 1} = 0.015809581$

CR value is less than 0.1, so it can be concluded:

		sequence of criteria
0.12	Less Competitive	3
0.56	Competitive	1
0.32	Very Competitive	2

Alternative Analysis

In this case, it is the respondents who makes the judgment for the criteria with qualitative information obtained from the survey.

Less Competitive Alternatives

With the same way of the steps in the alternative section, the following table is obtained:

Less Competitive	Less Intend	Intend	Very Intend
Less Intend	1	1	3
Intend	1	1	2
Very Intend	1/3	1/2	1

With the same calculation steps, the following results are obtained:

$$CR = \frac{CI}{IR} = \frac{3.018318393 - 3}{3 - 1} = 0,0157917$$

CR value is less than 0.1 so it can be concluded:

		Alternative Sequence
0.44	Less Intend	1
0.39	Intend	2
0.17	Very Intend	3

Competitive Alternative

With the same way of the steps in the alternative section, the following results are obtained:

Competitive	Less Intend	Intend	Very Intend
Less Intend	1	1/8	1/8
Intend	8	1	1/2
Very Intend	8	2	1

With the same calculation steps, the result obtained is:

$$CR = \frac{CI}{IR} = \frac{3.05454918 - 3}{3 - 1} = 0.047025155$$

The CR value is less than 0.1 so it can be concluded:

		Alternative Sequence
0.06	Less Intend	3
0.36	Intend	2
0.58	Very Intend	1

Very Competitive Alternative

In the same way as the steps in the alternative section, the results are obtained as presented in the following table:

Very Competitive	Less Intend	Intend	Very Intend
Less Intend	1	1/7	1/9
Intend	7	1	1/3
Very Intend	9	3	1

With the same calculation steps, the following results are obtained:

$$CR = \frac{CI}{IR} = \frac{3.082302181 - 3}{3 - 1} = 0.070950156$$

CR value is less than 0.1 so it can be concluded:

		Alternative Sequence
0.05	Less Intend	3
0.29	Intend	2
0.66	Very Intend	1

Conclusion of Alternative Analysis

	Less Competitive	Competitive	Very Competitive	Average
Less Intend	0.44	0.06	0.05	0.1838
Intend	0.39	0.36	0.29	0.3461
Very Intend	0.17	0.58	0.66	0.4701

Conclusion

- 47% of respondents really intend to use the Mersyprice application
- 35% of respondents intend to use the Mersyprice application
- 18% of respondents less intend to use the Mersyprice application