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Environmental Engineering

Analysis of Disinfection Technologies that can Increase the Efficiency of Indoor Logistics Processes, which has been Reduced due to the COVID Pandemic

62-71

Adrienn Boldizsár Ákos Tóth Erika Török Attila Pásztor

As a result of the Coronavirus, both supply chain and internal logistics processes at factories have changed a lot. In many areas, the effectiveness of the logistics processes has declined because of the restrictions implemented against the virus. The study lists some adverse effects where logistics processes had to be modified due to the changing and protection measures against or negative effects of the virus. The authors also argue that these restrictions decreased the efficiency of logistics processes and workers' productivity. One option to increase the logistics sector's efficiency is to use air purification technologies, like the ones studied in this paper: UV-C, Bioxygen® or plasma-ion decontamination technologies. These disinfection processes can create a safe indoor environment. The authors analyse the examined technologies with SWOT analysis. The analysis results demonstrate which disinfection application is the most beneficial to help in improving indoor air quality for logistics processes.

Possibilities of the Reclamation of Wastewater in Small Abattoirs Combined with Rainwater Harvesting

115-125

Gabriella Hancz

The purpose of the study is to review the extent to which waste water from small mobile slaughterhouses can be reclaimed along with the basic cases and the purpose for which this can be realized. Keeping the criteria of sustainability in mind, I identify the possible and at the same time reasonable combinations of technology, highlighting and presenting in more detail those that include the utilization of waste water and the utilization of rainwater. I will describe the limiting factors - site features, environmental protection and health regulations - which are decisive in which alternative can be chosen during a specific installation.

PDF (Hungarian)

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Management Sciences

The Impact of Sales Promotion, User Interface and User Experience Design on Shopee App Users' Repurchase Intentions

90-104

Gulielmus Brahma Rantau Lumban Tobing, Patrick Vivid Adinata, Fransisca Desiana Pranatasari, Kristia Kristia

By 2022, Gen Z and millennial consumers dominated Shopee usage in Indonesia. Similar e-commerce platforms are forced to constantly innovate to remain competitive in the market due to increasing competition. Therefore, the primary focus of e-commerce platform development should be on the user interface, user experience design, and promotions that are appealing and easy to access so that potential customers are inclined to repurchase. This research aims to determine the influence of UI design, UX design, and promotions on the repurchase intention of users of the Shopee application. The sampling method used was systematic sampling. Ninety-six respondents are included in the sample. This study uses descriptive analysis, classical assumption tests, multiple linear regression, and hypothesis testing for data analysis. SPSS Statistics 28.0 was used for data processing. The study found that user interface design, user experience design, and sales promotions statistically impact the repurchase intention of users of the Shopee application. The results demonstrate the effectiveness of repurchase intent in e-commerce.

Digitalization Trends and Their Possible Implications to SME Performance: Comparative Study Between Hungary and Azerbaijan

1-13

Leyla Mahmudova

This comparative research intends to find similarities and differences in the digitalization level of Hungary and Azerbaijan. Following the state of art in digitalization, further focus is on the digitalization of small and medium enterprises in both countries. The secondary research is done through several international reports and databases collected for years 2018-2022, depending on the availability. The comparison is performed based on four subcategories of digitization areas defined by the European Commission. The study holds its uniqueness due to the absence of comparative research between the mentioned two countries and the indicators used. The results contribute to the awareness, existing knowledge and provide future research insights into digitalization trends of both countries.

Sport Economics

Green Sports Products – Environmentally Friendly Efforts of some Sports Equipment and Sportswear Manufacturers.

45-61

Emese Makara

In today's world, the issue of sustainability has become a cardinal problem on a global scale. The question of sustainability affects society, health, the economy, and the environment to a large extent. The examination of the environmental aspects of sustainability at the points where the sports sector interacts with the environment is considered a basis for research, and an increasing number of international studies and literature deal with this topic. Sports equipment and sportswear manufacturers operate through high numbers of multi-level global supply chains. They constantly strive to meet sudden changes in consumer demand, which results in high demand for raw materials and resources, waste and greenhouse gas emissions, and water consumption, all of which contribute to the most harmful environmental effects.

The aim of this study is to present the environmental protection measures of Nike, Adidas, and Under Armour, multinational manufacturers of sports equipment and sportswear, aimed at raw material usage, waste management, minimizing water consumption, and reducing their carbon footprint, which they are increasingly applying as part of their business strategy.

Examination of Sports-Related Expenditure by Competitive Sportsmen and Women

126-134

Kristóf Tibor Dorogi

The economic role of sport has grown worldwide in recent decades, and Hungary is no exception. Sport is one of the most important industries, offering significant economic benefits to the country. Accordingly, the sports economy is attracting increasing attention and playing an increasingly important role in both the international and domestic economy In the study, we looked at how much people spend on sport activity. A questionnaire survey was conducted. In addition to demographic data, we asked about their sporting habits and their willingness to spend on sport. The majority of respondents are competitive athletes, mostly competing in team sports. The results show that respondents who compete in team sports have a much higher expenditure, on a monthly basis, than people who compete in individual sports.

Investigation of Parental Roles in Relation to Youth Football

105-114

Zoltán Szalánczi Éva Bácsné Bába

Views: 263

My research is based on the fact that, thanks to the development of sports and the capital flowing into the sector, youth sports are no longer just a useful way of spending free time for children and a mean for educating them for a healthy lifestyle, but also an opportunity to lay the foundation for an adult sports career and, with it, secure future existence. In order for the training to be effective and productive, one of the many components is the existence of parental support. Youth competitive sports pose many challenges for a family and influence their lives from several aspects. In my research, I examined how youth sports affects parents in terms of certain demographic variables, what changes it generates in their family life, and I also paid attention to what expectations the family has about sports. The basis of the study is an online questionnaire survey, which was filled out by more than 700 parents of youth football associations. My research revealed that, in accordance with the previous literature related to the topic, their children's sports have a significant impact on the lives of the parents and they set different expectations regarding it, which are also influenced by various social and demographic factors.

PDF (Hungarian)

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Mechanical and Vehicle Engineering

Prediction of FLD using Abaqus and Gurson Model for Simple Flat Spacemen

32-44

Tatiane Domokos · Attila Baksa · Szabolcs Szávai

Views: 165

In the past century, in many industries, such as, metal forming industry, it has been important to predict ductile damage and fracture of metals under complex loadings. Regarding damage mechanics, one of the most classical models is the GTN, which was originated from Gurson and later enhanced by Tvergaard and Needleman. The inprovement was achieved by introducing an equivalent void volume fraction f and two more parameters called q_1 and q_2 into the yield function of Gurson's model.

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An Analytical Solution for the Two-Layered Composite Beam-Column with Interlayer Slip and Constant Axial Load

14-31

István Ecsedi · Attila Baksa · Ákos József Lengyel · Dávid Gönczi

Views: 151

The authors present an analytical solution for the two-layered composite beams with imperfect shear connections. The considered beam is simply supported at both ends. The beam is subjected to transverse and axial loads. The kinematic assumptions of the Euler-Bernoulli beam theory are used. The connection of the beam components is perfect in normal direction, but the axial displacement field may have jump. The shear axial force derived from the imperfect connection is proportional to the relative slip occurring between the layers. The determination of the analytical

solution is based on the Fourier method. Two examples illustrate the application of the presented analytical method.

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Manufacturing Process Optimization and Tool Condition Monitoring in Mechanical Engineering

72-89

Krisztián Deák József Menyhárt

Views: **283**

The optimization of manufacturing and production processes with various computer software is essential these days. Solutions on the market allow us to optimize and improve our manufacturing and production processes; one of the most popular software is called Tecnomatrix, which is described in this paper. Tool condition monitoring is a vital part of the manufacturing process in the industry. It requires continuous measurement of the wear of the cutting tool edges to improve the surface quality of the work piece and maintain productivity. Multiple methods are available for the determination of the actual condition of the cutting tool. Vibration diagnostics and acoustic methods are included in this paper. These methods are simple, it requires only high sensitive sensors, microphones, and data acquisition unit to gather the vibration signal and make signal improvement. Extended Taylor equation is applied for tool edge wear ratio. Labview and Matlab software are applied for the measurement and the digital signal processing. Machine learning method with artificial neural network is for the detection and prediction of the edge wear to estimate the remaining useful lifetime (RUL) of the tool.

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The Impact of Sales Promotion, User Interface and User Experience Design on Shopee App Users' Repurchase Intentions

GULIELMUS BRAHMA RANTAU LUMBAN TOBING[1], PATRICK VIVID ADINATA[2], FRANSISCA DESIANA PRANATASARI[3], KRISTIA[4*]

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Abstract. By 2022, Gen Z and millennial consumers dominated Shopee usage in Indonesia. Similar e-commerce platforms are forced to constantly innovate to remain competitive in the market due to increasing competition. Therefore, the primary focus of e-commerce platform development should be on the user interface, user experience design, and promotions that are appealing and easy to access so that potential customers are inclined to repurchase. This research aims to determine the influence of UI design, UX design, and promotions on the repurchase intention of users of the Shopee application. The sampling method used was systematic sampling. Ninety-six respondents are included in the sample. This study uses descriptive analysis, classical assumption tests, multiple linear regression, and hypothesis testing for data analysis. SPSS Statistics 28.0 was used for data processing. The study found that user interface design, user experience design, and sales promotions statistically impact the repurchase intention of users of the Shopee application. The results demonstrate the effectiveness of repurchase intent in e-commerce.

Keywords: user interface, user experience, sales promotion, repurchase intention

Introduction

Convenience in various fields has been affected by technological advancements, even to the extent that digital media have replaced traditional purchasing and selling practices [1], [2]. The e-commerce platform is one of the solutions for connecting online sellers and buyers [3], [4]. E-commerce platforms offer space for online retailers who wish to sell on their websites. In its development, companies like Shopee have begun to create mobile-based marketplace applications that consumers can access via smartphones. Every company is constantly attempting to develop innovations to attract potential customers and increase its market competitiveness in a highly competitive marketplace. Shopee's strategy includes offering sales promotions. Shopee offers a variety of services in a single application in order to compete with its rivals. This is done so that users can access multiple services without needing to download additional applications. As a form of productivity enhancement, businesses must choose the appropriate steps for designing the appearance of their applications due to the large number of services on a single e-commerce platform [5], [6]. If an application has an attractive UI (User Interface) and UX (User Experience) design that is easy to access, the user will feel comfortable using the

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application and will not be overwhelmed by the variety of services. Some studies found that user experience influences repurchase intent [7], [8]. Some previous studies have used UI/UX combined into one independent variable that affects customer purchase intention [9]. However, in this study, the authors separate UI and UX into two distinct constructs to explore their impacts on customer repurchase intention[10]–[12]. While UI focuses more on a platform's design and visual appearance, UX talks about the ease of use, the ease of understanding the platform, and the overall satisfaction of the consumer's interaction with the platform. A platform may have an attractive UI design, but certain features need to be improved, making it difficult for users to navigate and thus disrupting the overall experience [13]. Therefore, in this study, we examine UI and UX as two independent variables that influence customer repurchase intention differently.

User interface design functions as an interactive relationship between users and products or applications to maximize user satisfaction [13]. With the proper user interface design, businesses can achieve efficiency [14]. Increasing productivity through platform efficiency is not a simple task, but rather a very complex one. Lack of attention to usability, compatibility between systems and the real world, customization, user support, user workload, interaction, compatibility, system state visibility, user experience, adaptability, and accessibility can result in the loss of prospective customers [15]. Aspects of the user interface include: 1) visual design, which refers to the consistency, aesthetics, and attractiveness of the website's appearance; 2) Navigation design refers to the page's structural arrangement and layout. 3) The ability of the site to convey information is referred to as information design [16].

A product's user experience design is an experience created for people who use it in the real world [17]. User experience is the result of the user's internal considerations, including needs, expectations, and motivations, which are accommodated by the characteristics of the system and the situational context of use [18]. The larger the organization, the more reliant on computer systems it is, and the role of this system becomes critical. If the end user discovers that the system is interfering with their work, they may become stressed and frustrated, resulting in a failed transaction due to disappointment [19]. The usefulness of an application can be measured by several factors, including whether users believe the product has uses and benefits, whether the product is easy to use, whether the product is easy to learn and understand, and whether the user feels satisfied after using the product [20].

Sales promotion is a collection of incentive tools that are intended to accelerate purchases [21]. A sales promotion is a stimulus that can influence the cognitive and behavioural characteristics of consumers so that they are attracted to the offered products and make purchases [22]. The tools used for promotion to consumers include, coupons namely voucher that buyer can use to save money when buying a product and contests, sweepstakes and games, which are opportunities given to buyers to win something with extra effort or with chance[23].

Repurchase intention is a customer's positive reaction to a company's product and interest in consuming the product again [24]. In the context of consumer behaviour in online shopping, repurchase intention can also be comprehended as the subjective likelihood that consumers will revisit an e-commerce site and make additional purchases there [25]. The following indicators can help determine repurchase intent: 1) transactional interest is a person's propensity to repurchase previously consumed

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products; 2) referential Interest is a person's tendency to recommend a product or service; 3) preferential interest, the behaviour of a person who has a strong preference for the product consumed; 4) exploratory interest, the behaviour of a person who is constantly seeking information about the desired product [26]. By including these four indicators, the study aims to provide a comprehensive understanding of the factors influencing customers repurchase intentions on the Shopee app. Each indicator added a distinctive perspective to the analysis, allowing a more nuanced examination of repurchase intentions, motivations, and decision-making.

Previous research suggests that sales promotions and user interfaces impact consumers' repurchase intentions. The user interface is the variable with the most significant influence. In order to increase the number of visits and transactions in e-commerce, the user interface can be a significant factor in its development [26]. UI and UX are among the most essential aspects of a digital application. It can facilitate the process of application and user interaction. A positive user experience can decrease user frustration, which decreases user satisfaction [27]. In addition to resolving the research questions, this study attempts to apply previous research findings. The user interface context sheds light on the ongoing phenomenon of platform competition and user interface standards. The expanding significance of the user interface in platform and standards competition makes this study applicable, filling a gap in the literature [27].

Problem and Objectives of the Study

Some Shopee application users complain that the UI and UX designs are too crowded and even messy, but due to the numerous sales promotions offered by Shopee, users continue to be interested in using the Shopee application as a shopping destination. However, some users are still comfortable with the Shopee application's UI and UX design, and do not agree that it is too cluttered or disorganized. The following research objectives can be formulated based on the factual problems that occur:

- Proving that user interface design, user experience design, and sales promotions all have an impact on Shopee application users' repurchase intentions.
- Proving that user interface design influences the repurchase interest of Shopee application users.
- Proving that user experience design influences Shopee app users' repurchase intentions.
- Proving that sales promotions influence Shopee app users' repurchase intentions.

This research is expected to assist companies in selecting the best strategy to increase user repurchase interest, and it can be used by companies to improve the appearance quality of UI and UX application designs.

1. Hypotheses of the Study

1.1. Hypothesis Development

Hypothesis 1: User interface design, user experience design, and sales promotions simultaneously affect the repurchase intention of Shopee application users.

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Aspects of user interface design, user experience, and sales promotion are constructs that critically impact consumers' repurchase intentions when using e-commerce platforms [12], [28]. According to current literature on mobile application design, user interface design significantly determines user satisfaction and intent to reuse [29]. In addition, the user experience design is essential for developing a positive affective attachment to the application, which increases user satisfaction and loyalty [30]. It was also discovered that sales promotions significantly impact consumers' repurchase intentions [31], [32]. Therefore, it is hypothesized that user interface design, user experience design, and sales promotions simultaneously influence the repurchase intent of Shopee application users.

Hypothesis 2: User interface design influences the repurchase intention of Shopee application users.

The user interface design of mobile applications significantly impacts user satisfaction and repurchase intent [9], [11], [14]. UI design influences users' perceptions of the application's utility, usability, and enjoyment, which are all crucial factors in determining whether or not users will repurchase the application [33]. Moreover, a well-designed user interface is crucial in enhancing users' cognitive and emotive connections with the application, thereby increasing user loyalty and satisfaction [33], [34]. When a mobile application's interface is visually enticing and intuitive, users are likelier to develop a favorable opinion of it [35]. Therefore, the user interface design of the Shopee application has a significant influence on the repurchase intention of its users.

Hypothesis 3: User experience design influences the repurchase intention of Shopee application users.

User experience design in mobile applications aims to create positive user experiences by providing functional, emotional, and significant interactions [36]. User experience design influences mobile application users' gratification, enjoyment, and attachment [37]. The design of the user experience has a significant impact on users' intentions to utilize an application [12], [38]. The user experience design has a positive effect on the cognitive, affective, and behavioral attachment of mobile application users [36]. Consequently, it is plausible to hypothesize that user experience design substantially influences the repurchase intent of Shopee application users.

Hypothesis 4: Sales promotions have an effect on the repurchase intention of Shopee application users.

Mobile applications use sales promotions to raise user awareness, pique their interest, and influence purchasing decisions [39]. Sales promotions can offer financial and non-financial incentives, such as discounts, coupons, and rewards, influencing users' intent to utilize applications positively [40], [41]. Sales promotions play a significant role in encouraging mobile application reuse among users [42]. Likewise, mobile application users who receive coupons are more likely to utilize the application than those who do not [43]. Therefore, it is plausible to hypothesize that sales promotions significantly impact Shopee application users' repurchase intentions.

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1.2. Methodology

Quantitative research methods were used for this study. Using an online Google form, questionnaires were distributed as part of an online survey. The online questionnaire, whose questions were written in the Indonesian language, was distributed through various social media owned by the researchers, such as WhatsApp, Instagram, and Facebook, to obtain respondents who fit the purposive criteria of this study. The population of this study only consists of Shopee application users. Non-probability sampling with a purposive sampling technique was used as the sampling method. The sample of this study consists of Shopee application users in Indonesia who have made repeated purchases, with a total of 96 respondents. The online questionnaire also asked several questions about the respondents' demographic characteristics, including their gender identity, age, occupation, income, and type of Shopee loyalty member, which can be used to infer their level of e-commerce application loyalty. According to the results of the distribution of the questionnaires, there are 46 male and 51 female respondents out of 96 total respondents, or 47% and 53%, respectively. Regarding age, 2.08 percent of respondents are younger than 17, 86.46 percent are between 17 and 30, and 11.46 percent are older than 30. Regarding the type of occupation of the respondents, it is known that the majority of respondents (53.13%) are students, followed by private employees (20.83%), housewives (20.83%), and civil servants (2.08%) and high school students (3.13%). In terms of monthly income, 45.83% of respondents earn between Rp 1,000,000 and Rp 3,000,000 per month, 27.08% of respondents earn less than Rp 1,000,000 per month, and there are segments of respondents with incomes between Rp 3,000,0001 and Rp 5,000,000 per month and more than Rp 5,000,000 per month, each comprising 13.54 % of the total number of respondents. According to the characteristics of the respondents based on the type of loyalty member, 56.25 percent of the respondents are Silver members or have purchased products from Shopee no more than five times, 31.25 percent of the respondents are Gold members, or Shopee customers who have purchased more than five times but fewer than 35 times and 12.5 percent are Platinum members who have purchased more than 35 times.

User interface design (X_1), user experience design (X_2), and sales promotion (X_3) are the independent variables in this study, and repurchase interest (Y) is the dependent variable. Table 1 shows a set of variables, indicators, and questionnaire statements used in this study.

Variables	Indicators	Questionnaire Items
User Interface Design (X1) User interface design involves the interaction of users and products or programs with the aim of optimising user satisfaction. The user interface includes the appearance, feeling, presentation and interactive relationship between the product and the user [44].	Visual design	The overall appearance of the Shopee app (colours, fonts, boxes, navigation tools) looks good and has been displayed well
		The overall appearance design of the homepage has been displayed properly
		The appearance design of the Shopee application is comfortable to look at
	Navigation design	The icon design used in the Shopee application makes it easy to use

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		The display of product choices, product boxes, and product information has been displayed well
	Information design	I get product information easily and clearly when using the Shopee app
		I see that the product information displayed in the Shopee application is in accordance with the facts and does not change
		Overall, the product selection, product box, and product information have an attractive design
User Experience Design (X2) User experience is the experience that a platform creates for the people who use it in the real world [45].	Ease of use	The placement of icons on the homepage of the Shopee app makes it easy to use
		I can browse, enter, and exit various content in the app easily
		The overall placement of content (products, menus, advertisements, icons, boxes, etc.) looks neat, making it easy to use
	Ease of learning	The Shopee app can be used well and is easy to understand
		The grouping, ordering, and arrangement of products in the Shopee app are easy to understand and easy to use
	Experience satisfaction	I feel satisfied with the appearance design of the Shopee application
		I am satisfied with the ease of using the Shopee application
		I am satisfied with the ease and appearance design of the Shopee application so that it encourages me to shop again through the application
Sales Promotion (X3) Sales promotion is a collection of generally temporary incentive tools designed to encourage more quickly or larger purchases of specific market offerings by consumers or businesses [46].	Voucher	I am interested in the variety of vouchers offered by Shopee
		I made a purchase through the Shopee application because of the vouchers offered
		I feel that the vouchers offered encourage me to shop again through the application
	Contests, sweepstakes and games	I feel interested in the sweepstakes offered by Shopee

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		I feel that the sweepstakes given by Shopee encourage me to use the application
Repurchase Interest (Y) Repurchase interest is the behaviour of customers who respond positively to the products or services that have been provided by a company and are interested in re-consuming products or services from that company [47].	Transactional interest	I intend to shop with the Shopee app again
		I intend to shop more often using the Shopee app
		I have made a return transaction using the Shopee app
	Referential interest	I will recommend the Shopee app to friends and family as a result of my satisfactory shopping experience
		I will recommend the Shopee app on social media as a result of my satisfactory shopping experience
	Preferential interest	I will recommend the Shopee app on social media as a result of my satisfactory shopping experience
		I intend to continue shopping with the Shopee app
		I intend to use the Shopee application when I want to shop online because the services and benefits, I received are satisfying
	Explorative interest	I am satisfied and will not switch to any other marketplace than Shopee
		I am trying to find more information about shopping through the Shopee application
		I am interested in shopping using the Shopee application after hearing about it from friends or family

Table 1 Questionnaire Items

This study's instrument test was conducted by conducting a validity test with the criteria that r count > r table (statement items declared valid), and the reliability test with variable criteria had a Cronbach Alpha value > 0.60. (declared reliable) [48]. The classical assumption test was applied to the data analysis by conducting a normality test using the Kolmogorov-Smirnov Normality Test method, a multicollinearity test, a heteroscedasticity test, and a linearity test. Once all the data have met the classic hypothesis testing criteria, the next step is to test the simultaneous influence of user interface, user experience, and promotion on repurchase intention using the F-test and then to test the partial relationship of each independent variable to the dependent variable using the t-test.

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2. Results and Discussion

2.1. Validity and Reliability Test

The validity test using the Pearson method reveals that the r count value of all statement items for each variable is greater than 0.200. Then, each variable's statement items are all declared valid. Using the Cronbach Alpha formula, this research evaluates the questionnaire's reliability. All variables based on Table 2 have Cronbach Alpha values greater than 0.60, indicating that the variables used are reliable [49].

Variable	Cronbach's Alpha
User interface design	0,850
User experience design	0,860
Sales promotion	0,796
Repurchase interest	0,868

Table 2. Reliability Test Results

2.2. Classic Assumption Test

The normality test was carried out to determine whether the data used was normally distributed or not. The method used is the Kolmogorov-Smirnov Normality Test. The data can be said to be normally distributed if the sig. >0.05. The test results yield a significance value of 0.131, so it can be concluded that the data is normally distributed because the significance value is 0.131 > 0.05. The multicollinearity test was carried out with the aim of knowing whether there is a correlation between the independent variables in the regression model. If the tolerance value is greater than 0.1 or VIF is less than 10, multicollinearity is not present. The results of the test indicate that there is no multicollinearity between the independent variables because the tolerance value for each variable is greater than 0.10 and the VIF value for each variable is less than 10, as shown in Table 3.

Variable	Tolerance	VIF
User interface design	0,290	3,444
User experience design	0,281	3,556
Sales promotion	0,545	1,836

Table 3 Multicollinearity Test

The heteroscedasticity test was conducted to determine whether the residual variance varies unequally from one observation to the next (heteroscedasticity) in the regression model. The Glejser test is used to determine whether or not heteroscedasticity exists. According to Table 4, there is no heteroscedasticity because each variable has a significance level greater than 0.05.

Variable	t	Sig
User interface design	1,296	0,198
User experience design	-1,672	0,098
Sales promotion	-0,732	0,466

Table 4 Heteroscedasticity Test

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The linearity test determines whether variables have a linear relationship. If the significance value is greater than 0.05, then the variables have a linear relationship. Based on Table 5 it is known that there is a linear relationship between variables because the significance value of each variable is greater than 0.05.

Variable	Sig
User interface design	0,666
User experience design	0,288
Sales promotion	0,158

Table 2 Linearity Test

2.3. Regression Analysis

The objective of the multiple regression analysis was to determine the impact of the independent variables on the dependent variable. Table 6 displays the results of multiple regression analysis.

Variables	B	Std. Error	Beta	t	Sig.
Constant	5,640	2,248		2,509	0,014
User interface design (X1)	0,298	0,148	0,241	2,007	0,048
User experience design (X2)	0,421	0,150	0,341	2,800	0,006
Sales promotion (X2)	0,490	0,147	0,291	3,322	0,001

Table 3 Multiple Regression Analysis Result

Based on the table, get the following equation:

$$Y = 5{,}640 + 0{,}298\ X_1 + 0{,}421X_2 + 0{,}490X_3$$

According to the findings of this study, user interface design (X1), user experience design (X2), and sales promotions (X3) all have a positive effect on Shopee application users' repurchase intention (Y). This is supported by the results of the F test which yields a significant value of 0.001 less than 0.05 (0.001 <0.05) and the calculated F value of 49.078 is greater than the F table value of 2.70 (49.078 > 2.70). Therefore, it can be concluded that user interface design, user experience design, and sales promotions influence the repurchase intention of Shopee application users.

User interface design (X1) has a significant and positive influence on Shopee application users' repurchase intent (Y). This is supported by the results of the t test, which yield a significant value of 0.048 less than 0.05 and a t count of 2.007 greater than the t table of 1.986. Therefore, it can be concluded that Shopee application users are more likely to repurchase when the User Interface Design is more appealing. The test results indicating that the user interface design has a significant effect on repurchase intent are consistent with findings from prior research indicating a positive effect [50], [51].

In testing Hypothesis 3, it is known that user experience design (X2) has a positive effect on Shopee application users' intention to repurchase (Y). This is supported by the results of the t test which produces a significant value of 0.006 less than 0.05 (0.006 <0.05) and a t count of 2.800 greater than a ttable of 1.986 (2.800 > 1.986). Therefore, it can be concluded that the clearer the user experience design, the greater the repurchase intent of Shopee application users. This study's findings are consistent with previous studies who found that user experience design has a positive effect on repurchase intention [38], [52].

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Following the results of testing hypothesis 4 in this study, sales promotion (X3) has a positive effect on Shopee application users' repurchase intention (Y). This is supported by the t test, which yields a significant value of 0.001 less than 0.005 (0.001 0.005) and a t count value of 3.322 greater than a t table value of 1.986 (3.322 > 1.986). Thus, it can be concluded that the repurchase interest of Shopee application users is proportional to the attractiveness of the offered sales promotions. According to previous research, sales promotion also has a positive and statistically significant effect on repurchase intention[53], [54].

3. Conclusion

Based on the research conducted, it can be concluded that user interface design, user experience design, and sales promotions influence repurchase intention simultaneously. If the user finds the application's appearance and sales promotions to be appealing, and has a positive experience while using the application, then the user will be interested in making additional purchases through the Shopee application. The second conclusion is that the design of the user interface affects repurchase intent. If the user finds Shopee's user interface design to be engaging, the user will be interested in making additional purchases through the Shopee application. According to the third hypothesis, user experience design influences repurchase intent. If the user has a positive experience while using the application, they will be interested in reusing the Shopee application as a shopping destination. Furthermore, sales promotion has an effect on repurchase intention. If the offered sales promotions are more attractive, the user's interest in repurchasing will also increase. The variable user interface design, user experience design, and sales promotion has a coefficient of determination of 61.5%. This indicates that 38.5% of other independent variables not included in the study can influence the repurchase intention variable. Future researchers can therefore take into account other independent variables that may influence repurchase intentions, such as website quality, customer satisfaction, discounts, and more.

The managerial implications that Shopee can consider as an object of research are that this company needs to maintain the quality of their application's user interface design, especially to target potential consumers in generation Z and the millennial generation. Because, according to respondents, Shopee's user interface design on information design indicators falls into the category of attractive, but this score is among the lowest compared to other indicators that fall into the category of very attractive. Due to this, Shopee is able to include important notes in articles at the seller's education centre regarding the significance of factual product information, thereby increasing seller awareness of the significance of factual product information. Regarding user experience design, the application's "satisfaction" indicator has the lowest score among the other indicators and is categorized as attractive. Therefore, Shopee can conduct usability testing by directly inviting participants who are willing to test the created design, so that it is immediately apparent whether the created design is easy to use and whether an error has occurred. So that later respondents can experience greater satisfaction. Shopee's sales promotion requires more innovation, one of which is to improve the quality of the lottery by awarding discount vouchers to shops that are frequently visited by users or are in the user's shopping cart, thereby encouraging users to make additional purchases.

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The limitation of this study is that this research uses a purposive sampling method with a relatively small sample size compared to the total population of Shopee users in Indonesia, so the study's findings cannot be generalized to a more extensive user base. Future research should include a larger sample size and be more diverse regarding demographic, geographic, and behavioral characteristics to address this weakness. The use of an online questionnaire in this study, which relies on the voluntary nature of respondents to complete the questionnaire, also has the disadvantage of selection bias. To overcome this problem, future research can use a random sampling method to increase the generalisability of the sample to the population and also complement the survey results with qualitative research findings by conducting in-depth interviews with users of Shopee and other similar e-commerce platforms in high demand.

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