The Effect of Physical Experience and Integrated Information on Customer Purchase Behavior in Online-to-Offline Commerce

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Abstract **-** Online-to-Offline (O2O) is a business model increasingly being developed and widely implemented by companies in Indonesia. Therefore, the research examined the factors influencing purchasing behavior in Indonesian O2O commerce through economic theories, namely Perceived Risk and Perceived Benefit. The research procedures were carried out using a quantitative approach, and the data obtained were analyzed with Partial Least Square Structural Equation Modeling. The sample data was selected using a purposive sampling method and collected through an online survey instrument from 248 millennial customers who had made O2O purchases. The results show that all exogenous variables had significant effects, except for Physical Experience, which did not significantly affect Perceived Risk. Meanwhile, Integration Online-to-Offline Information (IOOI) had the most significant impact on enhancing customer purchase intention. The results also show that Perceived Benefits had a significant impact on customer purchase intention. This research offers a novel perspective by exploring how integrated customer behavior across digital and physical channels influenced purchasing decisions within the Indonesian context, where existing literature was limited. The results provide valuable insights for companies in formulating strategies to deliver effective physical experiences and IOOI. Companies should ensure that the information available across online and offline channels is complementary and consistent to maximize customer purchase intention.

Keywords: O2O purchase intention, physical experience, integration online offline information, perceived benefit, perceived risk

I. INTRODUCTION

O2O commerce is a business concept that uses a variety of mobile internet devices to seamlessly link online channels with physical brick-and-mortar establishments (Wang et al., 2020; Yao et al., 2023). The combination and integration of online and offline channels helps customers to search for items online and buy offline, and vice versal.

According to previous research, O2O has been increasing due to the impact of the development of e-commerce. While e-commerce popularity is increasing, traditional stores (brick-and-mortar or offline stores) still exist. Conventional stores have some distinctive advantages that cannot be provided by e-commerce, such as physical experience and consultation with store crew. Furthermore, customers are increasingly inclined to purchase from merchants who establish online shops to complement their physical stores (Li et al., 2020). Consequently, many retailers are adopting a hybrid approach by integrating online and offline store formats, commonly called Online-to-Offline (O2O) commerce. This model presents new opportunities for brick-and-mortar businesses that have been affected by the rise of e-commerce (Yao et al., 2022).

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The O2O business model has great potential by combining online and offline shopping experiences (Wang et al., 2021). In Indonesia, the O2O model is currently also increasing, and many companies are starting to implement it. O2O has been widely implemented in Indonesia by Matahari Mall, Uniqlo, Base, Love Bonito, Blibli, Zalora, and Bukalapak. In addition, Bukalapak has succeeded in leading the O2O market for UMKM in Indonesia. The company has successfully led penetration in the grocery/food ingredients category at 68% and the virtual product category at 46% (Nurdianti, 2022). The benefits of the business model are increasing brand awareness, marketing time efficiency, and maintaining customer trust (Thohir, 2023).

Given the rapid growth of O2O commerce in Indonesia, examining customer behavior within this context is crucial. Such research will contribute valuable insights to the existing research predominantly focused on developed countries (Yang et al., 2020). Understanding the unique dynamics of O2O in Indonesia, potentially differing from those observed in other markets, is vital for formulating effective O2O strategies for businesses. Two critical factors frequently highlighted in this regard are Physical Experience (PE) and IOOI (Yang et al., 2020).

In Indonesia, consumers often visit physical stores to inspect products before making an O2O purchase. Therefore, the physical store experience and the availability of online information are crucial. For example, Blibli.com has started opening offline stores to adapt and stay relevant to changing customer behavior. Blibli store maximizes the integration of the O2O ecosystem in marketing and sales to enhance the customer experience (Blibli, 2022).

Consumers' purchase decisions can be explained from various perspectives, including the economic perspective. This approach suggests that purchase decisions are made based on the evaluation of benefits and costs (or risks) (Shakir et al., 2022; Yang et al., 2020). Consumers are more likely to proceed with the decision when the perceived benefits of a purchase outweigh the associated costs or risks. Benefits are the total of the favorable features or satisfactions offered by a good or service that fulfills an individual's needs or desires(Xiao et al., 2019).

A consumer's view of the benefits of a transaction is referred to as the perceived benefit (Yang et al., 2020). Customers in the process of purchasing goods not only consider monetary benefits but also consider non-monetary benefits. High information and product quality, high satisfaction, experience, flexibility, and a reasonable price are a variety of formative measures for perceived benefit (Yang et al., 2020).

Consumers' perception of potential losses associated with using O2O commerce is perceived risk. This concept also encompasses a specific type of non-monetary cost that customers must consider when making purchasing decisions (Yang et al., 2020). Perceived risk can be categorized into several types, including financial, product performance, social, psychological, physical, and time/convenience risks (Forsythe & Shi, 2003; Mukherjee & Chatterjee, 2021).

Customer purchase intention is closely associated with product research and comparison (Arnold & Reynolds, 2003; Desmonda et al., 2024). In the context of O2O commerce, customers can access comprehensive information through online and offline channels. In Indonesia, consumers frequently visit physical stores to examine products firsthand before completing an O2O purchase, allowing the assessment of quality and performance of the items. O2O commerce thus offers the combined advantages of both online and offline shopping experiences. Therefore, this research aims to explore how Physical Experience and the Integration of Online and Offline Information impact O2O purchasing intention in Indonesia, offering insights to enhance business strategies.

The existence of a physical experience in the transaction process is a unique difference between O2O and e-commerce. This makes PE a critical factor in O2O and gives value-added services to O2O customers (Yang et al., 2020). Physical experience refers to the extent to which customers can visit physical stores to sample products or services, such as testing functionalities and assessing quality and service standards (Yang et al., 2020). Providing consumers with an offline experience can reduce their perceived risks and enhance their willingness to make a purchase (Wang et al., 2021).

By touching and trying products in physical stores, customers gain sensory experiences and additional information. It enables customers to make more informed purchasing decisions and to reduce uncertainty in the buying process (Shankar & Jain, 2023; Yang et al., 2020). This shows that in O2O purchasing model, consumers often require sensory engagement with the product. A common type of perceived risk among consumers is the potential for monetary loss, as individuals generally prefer to avoid losses—a concept known as loss aversion (Kahneman, 2013). This indicates that customers are reluctant to pay for products of subpar quality or those that fall below expectations. Based on these insights, the hypothesis is proposed.

H1: Physical Experience has negative effect on Perceived Risk.

PE provides knowledge about sensory of feel and is often difficult to express explicitly because it is very subjective in some situations. Customers need to touch and feel more before purchasing (Chokkannan et al., 2023; Zhang et al., 2022). The ability to inspect the products personally is one of benefits for customers (Ratchford et al., 2022). A comprehensive understanding of the product helps customers evaluate whether the right quality product is purchased at the right price. The positive feeling generated through the physical experience of both products provides

enjoyment and satisfaction, leading to improvements in perceived benefit. Based on these findings, the hypothesis is proposed.

H2: Physical Experience has positive effect on Perceived Benefit

IOOI is the degree to which online information is kept integrated with offline information of the presentations in physical stores in real-time so that a product or service order can be quickly confirmed and customers can seamlessly switch between the online system and offline stores (Schiessl et al., 2023; Yang et al., 2020). It allows consumers to navigate effortlessly between both types of stores, enhancing their overall shopping experience (Schiessl et al., 2023; Swoboda & Winters, 2021). Utilizing offline data, such as offline advertisements, store locations, contact details, price, and discount information, as evaluation resources to support online channels is the focus of integrated promotion, product, and price information (Li et al., 2020).

Consumers believe that conducting thorough information searches before making a purchase can help reduce perceived risks (Haridasan et al., 2021). Several research studies suggest that customers who perceive higher risk are more likely to utilize multiple channels, such as online and offline sources, to gather information before making a purchase (Hussein & Kais, 2020). Integrating promotional, product, and pricing information across these channels can help mitigate the negative effects of availability risk on customer retention and enhance customers' perceptions of information value (Li et al., 2020). Information from online and offline stores provides customers with a comprehensive understanding, helping to avoid unfavorable outcomes such as dissatisfaction with product quality, incorrect usage, long-term risks, or failure to meet their needs. Consequently, perceived risk decreases as the IOOI increases. Inadequate information may lead to unfavorable outcomes, resulting in dissatisfaction and loss. Based on these insights, the hypothesis is proposed.

H3: IOOI has negative effect on Perceived Risk.

IOOI provides consumers with the necessary information infrastructure to take advantage of offline physical services and online transactions. This includes access to detailed online information, convenient online payment methods, competitive online pricing, offline physical experiences, and in-person customer support (Yang et al., 2020). To gain sufficient knowledge for a satisfying shopping experience, consumers often browse online and offline channels, simultaneously acquiring insights into various product features (Shakir et al., 2022). In an O2O physical store scenario, for example, a customer may use their smartphone to visit a product's homepage to learn more about its quality and read customer reviews while physically examining and testing the product (Yang et al., 2020). This shows that customers utilize information from both online and offline channels to make purchase decisions, ensuring that the products purchased deliver the expected benefits based on the information provided through both mediums. Studies also show that IOOI positively influences perceived benefits at a significant level (Yang et al., 2020). Therefore, the hypothesis is proposed.

H4: IOOI has positive effect on Perceived Benefit.

In every purchase transaction decision-making, customers will see the benefits received over the risks such as sacrifices, cost, dissatisfaction, and even a sense of security in the purchasing process. The perceived risk of the product is uncertainty overall over the adverse implications of purchase (Guo et al., 2022). Perceived risk refers to the feeling of vulnerability and insecurity when making purchases, encompassing two types of uncertainty: the risk of losing privacy information to online retailers and the risk of being exposed to distorted or incomplete information provided by online retailers (Arora & Sahney, 2019; Li et al., 2020). The risk also refers to difficulties in returning the products and the lack of information to decide.

The perception of risk influences the potential of a purchase transaction being canceled, and it has become a crucial factor in driving purchase intention (Cho, 2004; Yadav et al., 2023). This shows that the higher the risk customers face in the purchasing process, the lower the customer's purchase intention. In the O2O business model, it is assumed that the risks experienced by customers can be minimized due to physical experience and IOOI. Customers via O2O can use all channels owned by the shop or company to touch, feel, and try the products they want to buy. Thus, the hypothesis is proposed.

H5: Perceived Risk has a negative effect on O2O Purchase Intention.

Increasing the perception of benefit when customers confirm their expectations of the product through the O2O model gives customers the confidence to make a purchase. One of the benefits that customers desire is the quality of the product. Perceived product quality has a positive effect on purchase decisions in the O2O model. The higher the perceived quality of the product, the greater the willingness to purchase the O2O model. (Wang et al., 2021). Therefore, the hypothesis is proposed.

H6: Perceived Benefit has positive effect on O2O Purchase Intention.

The concept of value, which is broadly described as the trade-off between total benefits gained and total sacrifices, illustrates the fundamental concepts of cost-benefit analyses (Kim et al., 2007). When

making purchasing decisions, customers compare cost factors and other risks with the anticipated benefits to assess the overall value of the purchase(Flavián et al., 2020; Gensler et al., 2017; Shakir et al., 2022). It can be concluded that if the total benefits outweigh the total risks or sacrifices, the customer perceives value in the purchase. This aligns with findings from Yang et al. (2020), which indicate that perceived benefits positively influence perceived value. However, perceived risk was unexpectedly found to have no significant effect on perceived value. Therefore, the hypothesis is proposed.

H7: Perceived Risk has a negative effect on Perceived Benefit.

II. METHODS

Non-probability and purposive sampling methods are used in this research. The criteria that respondents must possess included: (1) those who have made O2O purchase transactions in the last 6 months, (2) those aged 27 to 42 years (the millennial generation in Indonesia who were born in 1981 – 1996), and (3) domiciled in Java. The researchers selected the millennial generation considering that this age range is already working, digital native, and is classified as productive. Moreover, based on the results of census data 2020 from the Ministry of Education and Culture, the population was the 2nd largest in Indonesia. (Rakhmah, 2021).

Data is collected by using questionnaires from Google Forms. The design of questionnaires referred to previous studies and was modified with a 5-point Likert scale. The questionnaires were distributed from 21 Feb 2024 to 10 May 2024.

Testing and analysis of data are conducted using statistical data processing applying the Structural Equation Model (SEM) with the Partial Least Squares (PLS) approach through SMART PLS 4.0. The PLS-SEM was used because it could analyze complex models (Utomo & Kurniasari, 2023). In this research, two testing elements are observed in PLS, namely (a) testing the validity and reliability of the variables and (b) structural models (Hair et al., 2014).

To measure the significance of the relationship between variables, the hypothesis testing in this research is a 1-tailed test with a confidence level of 95% (alpha = 0.05). When the t-value >1.65, it shows that the independent variable had a significant relationship with the dependent variable (Hair et al., 2014). Table 1 shows the scale measurements.

Table 1 Scale Measurement

Variable		Indicators	Sources
Physical Experience	PE1	I can touch and try the product in physical store	(Yang et al., 2020 ; Xiao & Dong, 2015)
	PE2	I can confirm the quality of product in physical store	
	PE3	I can compare the product offering from online in physical store	
	PE4	I can assess whether the item meets my needs in physical store	
	PE5	I can receive comprehensive explanation on how to use the product in physical store	
	PE6	I hope to make better purchasing decisions by coming to physical store	
Integration of Online and Offline Information	IOOI1	Information about products on online and offline physical stores are consistent (align)	(Yang et al., 2020; Xiao & Dong, 2015)
	IOOI2	Information about the product available on online and in physical stores work best together.	
	IOOI3	Information about product promotions in physical stores (offline) and online stores is the same	
	IOOI4	Information on product stock availability in physical stores (offline) and online stores is the same	
	IOOI5	I understand the product better after getting complete information from physical stores (offline) and online stores	
	IOOI6	I didn't experience any difficulties when I had to choose whether it was better to go through online or offline store	
Perceived Benefit	PB1	O2O commerce allows me to get information online and experience trying products at the same time	(Yang et al., 2020; Chang et al., 2018)
	PB2	O2O commerce provides me a lot of shopping flexibility such as choosing products, deciding when to buy them, trying before buying)	
	PB3	With O2O, I can buy original products at cheaper prices	

Table 1 Scale Measurement (Continued)

Variable		Indicators	Sources
	PB4	Through O2O pattern, I was able to make a more satisfactory purchase.	
	PB5	I feel more secure if I buy products through O2O pattern	
Perceived Risk	PR1	O2O commerce purchase is riskier in terms of quality than other methods of shopping.	(Yang et al., 2020; Mukherjee & Chatterjee, 2021)
	PR2	O2O commerce purchase is riskier in terms of authenticity product than other methods of shopping.	
	PR3	I am worried that my personal data will be spread if I purchase products using O2O method	
	PR4	I am concerned about the security and privacy of my personal data if I purchase products via O2O	
	PR5	I am concerned about returning products with O2O purchase	
	PR6	There is a chance that the offering purchased through O2O commerce will not fulfill my requirements or expectations.	
O2O Purchase Intention	PO1	I am willing to buy products O2O	(Yang et al., 2020; Guo et al., 2022)
	PO2	I intend to buy products O2O	
	PO3	I intend to shop using an O2O pattern evert time I shop	
	PO4	I like O2O way of shopping	

III. RESULTS AND DISCUSSIONS

Table 2 shows the characteristics of respondents, consisting of gender, domicile, product, average monthly expense, and education.

A validity and reliability test is conducted on the instruments used in the research. Table 3 presents the test results. The validity test met the required criteria, as indicated by an Outer Loading value greater than 0.70, demonstrating that the indicators were reliable. In cases where the Outer Loading value is greater than 0.40 but less than 0.70, further analysis of the Average Variance Extracted (AVE) is recommended, with only AVE values of 0.5 or higher being considered acceptable. However, when the Outer Loading exceeded 0.70, it confirmed the adequacy of the indicator (Hair et al., 2014).

Based on these criteria, the IOOI1, IOOI3, IOOI4, and PB3 indicators are removed because their values were less than 0.5, resulting in an AVE of less than 0.5. Table 3 shows that the measurement of validity indicators is according to the criteria. Reliability test results are observed from Cronbach's alpha (CA) and Composite Reliability(CR). When both criteria (CA and CR) values are > 0.7, the research had high reliability (Hair et al., 2014). In addition, for exploratory study, Cronbach's alpha value between 0.60 to 0.70 is acceptable (Hair et al., 2022).

Discriminant validity is used to measure the extent to which a construct is truly different from other constructs based on empirical standards (Hair et al., 2022). When Heterotrait-Monotrait Ratio (HTMT) is valued above 0.90 showing a lack of discriminant validity in the model (Hair et al., 2022). Table 4 shows the result of VIF and R-Square.

The multicollinearity test is conducted before the structural model test to ensure that the latent variables in the model are insignificantly correlated with each other. Multicollinearity measurement used a Variance Inflation Factor (VIF); when the VIF number was larger than 0.2 and less than 5, the construct is considered to have no multicollinearity (Hair et al., 2014). The measurement results in Table 4 show no multi-linearity in the construct used in this model, and it had no substantial effect on a structural model estimated.

The R2 Value coefficient is a measure of the model's prediction performance and was determined as the squared correlation between the actual and anticipated values of a certain endogenous component (Hair et al., 2014). The R2 value shows how much of the construct's variance is explained and is normed between 0 and + 1; the higher the value, the better the construct is explained by the latent variable in the model (Hair et al., 2014). Table 5 shows the results of VIF and R-Square.

The results of the full SEM-PLS model used in the research are shown in Figure 1. To measure the significance of the relationship between variables, hypothesis testing is a 1-tailed test with a confidence level of 95% (alpha = 0.05). When the t-value >1.65, It shows that the independent variable has a significant relationship with the dependent variable (Hair et al., 2014).

Based on the test results of the hypotheses, PE had no significant effect on perceived risk; as a result, H1 was rejected. However, significant results are observed in other hypotheses, as presented in Table 6.

Table 2 Respondents Characteristics

Measurement	Type	Respondent	Percentage (%)
Gender	Male	126	51%
	Female	122	49%
Average Monthly Expense	> Rp 7,500,000. -	154	62%
	Rp 5,000,001. - Rp 7,500,000. -	50	20%
	Rp 3,000,000. - Rp 5,000,000. -	25	10%
	Rp 2,000,001. - Rp 3,000,000. -	12	5%
	Rp 1,500,001. - Rp 2,000,000. -	5	2%
	<= Rp 1,000,000. -	2	1%
Education	*Sarjana* (S1/S2/S3)	234	94%
	SMA/SMK/D3	14	6%
Total Respondent		248	100%

Table 3 Validity and Reliability Test Results

Variable	Indicator	Factor Loading	AVE (> 0.5)	CA (>0.7)	CR (>0.7)	Validity
Physical Experience	PE1	0.718	0.574	0.853	0.890	Valid
	PE2	0.763				Valid
	PE3	0.745				Valid
	PE4	0.772				Valid
	PE5	0.732				Valid
	PE6	0.812				Valid
Integration of Online and Offline Information	IOOI2	0.705	0.567	0.619	0.796	Valid
	IOOI5	0.839				Valid
	IOOI6	0.706				Valid
Perceived Benefit	PB1	0.739	0.654	0.823	0.883	Valid
	PB2	0.758				Valid
	PB4	0.870				Valid
	PB5	0.860				Valid
Perceived Risk	PR1	0.824	0.669	0.917	0.934	Valid
	PR2	0.833				Valid
	PR3	0.869				Valid
	PR4	0.773				Valid
	PR5	0.771				Valid
	PR6	0.792				Valid
	PR7	0.855				Valid
Purchase Intention O2O	PO1	0.894	0.760	0.895	0.927	Valid
	PO2	0.881				Valid
	PO3	0.829				Valid
	PO4	0.882				Valid

Table 4 Discriminant Validity

	HTMT Value
O2O Purchase Intention <-> IOOI	0.719
Perceived Benefit <-> IOOI	0.753
Perceived Benefit <-> O2O Purchase Intention	0.69
Perceived Risk <-> IOOI	0.45
Perceived Risk <-> O2O Purchase Intention	0.535
Perceived Risk <-> Perceived Benefit	0.445
Physical Experience <-> IOOI	0.609
Physical Experience <-> O2O Purchase Intention	0.42
Physical Experience <-> Perceived Benefit	0.445

Table 5 Multicolinearity Test and R-Square

	VIF (< 5)	Variables	R-square (0 -1)	R-square adjusted (0 -1)
PE -> PR	1.152	PR	0.064	0.056
IOOI -> PR	1.152			
PE -> PB	1.155	PB	0.26	0.251
IOOI -> PB	1.229			
PR -> PB	1.068			
PB -> O2O PI	1.099	O2O PI	0.329	0.324
PR-> O2O PI	1.099			

Table 6 Hyphothesis Result

Hypothesis	Relationship	Path Coefficient	Mean	Standard Deviation	T- Values (>1.65)	P values (<0.05)	Summary
H1	PE -> PR	0.053	0.048	0.065	0.812	0.208	Rejected
H2	PE -> PB	0.132	0.142	0.060	2.184	0.015	Accepted
H3	IOOI -> PR	-0.268	-0.272	0.063	4.223	0.000	Accepted
H4	IOOI -> PB	0.358	0.358	0.058	6.181	0.000	Accepted
H5	PR -> O2O PI	-0.265	-0.266	0.065	4.082	0.000	Accepted
H6	PB -> O2O PI	0.436	0.439	0.065	6.684	0.000	Accepted
H7	PR -> PB	-0.205	-0.205	0.058	3.528	0.000	Accepted

PE shows no effect on Perceived Risk (β= 0.053, P >0.05. So, the results do not support H1, and the hypothesis is rejected. However, PE shows a significantly positive effect on Perceived Benefit (β= 0.132, P <0.05); these results support H2. IOOI shows a negative effect on Perceived Risk (β= -0.268, P <0.05) and a positive effect on Perceived Benefit (β= -0.358, P <0.05); these results are

supported by H3 and H4. Meanwhile, Perceived Risk showed a significantly negative effect on O2O Purchase Intention (β= -0.265, P <0.05) and Perceived Benefit (β= -0.205, P <0.05); these results are supported by H5 and H7. Perceived Benefit shows a significantly positive effect on O2O Purchase Intention (β= -0.436, P <0.05); these results are supported by H6.

The results show that PE had no significant effect on Perceived Risk (H1). This means that customers still feel the risk of O2O shopping even when they have a physical experience. These results are in contrast with previous research by Wang et al. (2021), who explained that offering customers an offline experience could lower their perception of risk and increase their readiness to buy. PE is felt by customers when visiting a shop. However, data processing from respondent questionnaires shows that the risk of disseminating personal data is not reduced by physical experience. In the purchasing process, stores also collect customer data for their database needs, such as membership. Therefore, the presence of physical experience did not eliminate the risk perceived by the customer.

Although the research find that PE do not have a significant impact on Perceived Risk, it has a significant positive influence on Perceived Benefits (H2). Respondents in the research reported an increase in benefits when visiting the store and had prior experience with the store, such as touching, wearing, and trying the products. The positive feeling generated through the physical experience of both products could provide enjoyment and satisfaction, thereby improving the perceived benefit. This result is consistent with previous research by Yang et al (2020), which states that physical experience has a significant impact on perceived benefits and is found to be an important component for customers to engage in the O2O trading process. Furthermore, the O2O business model enabled customers to experience the benefits of the shopping process, as it provided a dual presence through both online and offline channels (Ram et al., 2020).

Interestingly, IOOI is a factor that plays a crucial role in the O2O business model, as noted in the research. The results show that it has a negative influence on Perceived Risk (H3). This suggests that when customers obtain information both online and offline, they gain a comprehensive understanding of the product. The gained understanding can reduce their risk perception. As previously argued, information gathered from online and offline stores provides more knowledge to prevent unfavorable outcomes, leading to a decrease in perceived risk with greater IOOI. This result is consistent with previous research, which states that integrating promotion, product, and pricing information can reduce the negative impact on customer retention and increase customers' perceptions

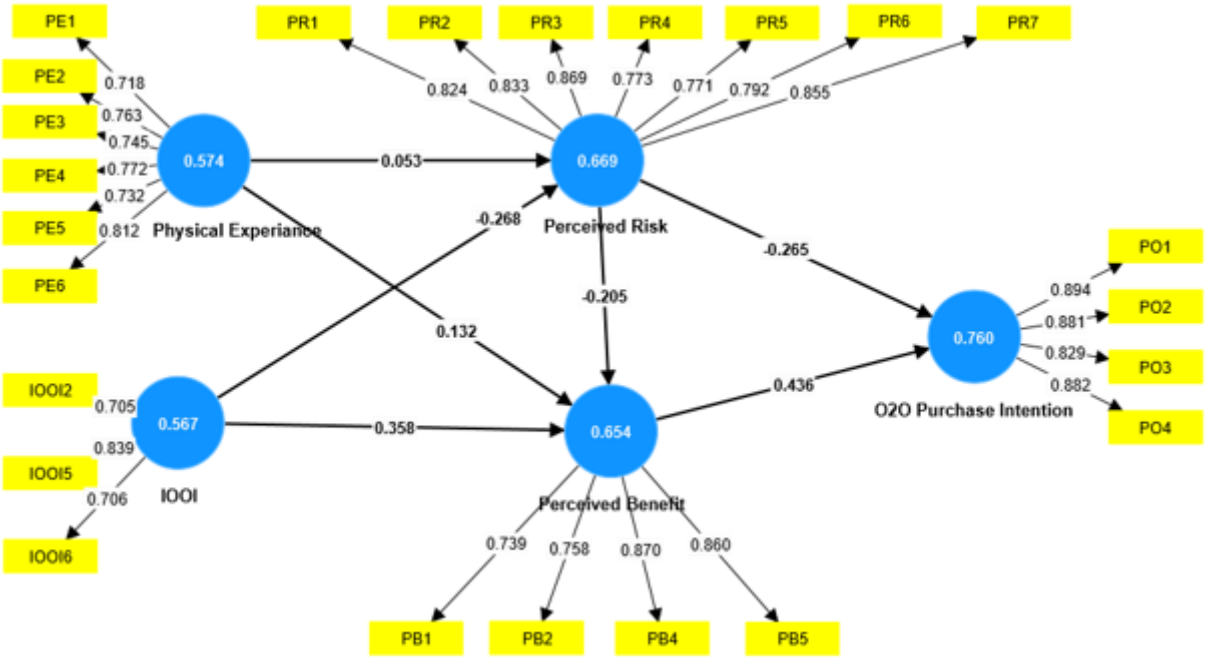

Figure 1 Full Model
(Outer Loading, AVE, Path Coefficient Result)

of the value of information (Li et al., 2020).

The research results show that IOOI also has a significant positive influence on Perceived Benefit (H4). This suggests that customers feel more satisfied when shopping using the O2O method, as more comprehensive information can be gained. Yang et al. (2020) state that customer satisfaction is a significant component of the perceived benefit of O2O commerce. The statement is also supported by (Chang et al., 2018), who state the quality of O2O system information can increase customer satisfaction.

Perceived risk had a significantly negative effect on O2O Purchase Intention (H5). The research shows that reducing perceived risk could increase customer intentions in O2O process. When the perceived risk to the customer is large enough, they may cancel the purchase transaction. Empirically, this result is consistent with Cho (2004), who states the perception of risk affects the likelihood that a purchase transaction is canceled. Forsythe and Shi, (2003), also find that perceived risk negatively predicted purchase intention. In the research, IOOI plays bigger role than physical experience in reducing perceived risk.

The results of the research show that Perceived Benefit has a significant positive effect on O2O Purchase Intention (H6). The result is supported by Yang et al. (2020), who state that the benefits perceived by customers can enhance their purchase decision-making. The research shows that customers felt a satisfying shopping experience with O2O concept. As a result, this encourages customers to shop using the O2O method. The result is consistent with Forsythe and Shi (2003), who find that perceived benefits positively predict purchase intention.

Following that, Perceived Risk has a significantly negative effect on Perceived Benefit (H7). The result indicates that customers assess the magnitude of the expected benefits by considering the associated risks. Gensler et al. (2017) show that customers consider risk and benefit factors when making a purchasing decision. When the total benefits received are greater than the total risks or sacrifices then there could be value received. Yang et al. (2020) show that perceived benefit has a positive effect on perceived value.

The research sample is limited to Java, which produced different results when compared to other regions, but the results were still widely applicable. Java was one of the most advanced regions in Indonesia in terms of the advancement of O2O business model. Therefore, the results from this research are considered representative and relevant to the general understanding of O2O development.

IV. CONCLUSIONS

In conclusion, after analyzing the results of data processing, the research questions are answered and explained. First, PE has an indirect influence on O2O customer behaviors through perceived benefits. Increasing physical experiences will increase perceived benefits, which could indirectly increase the influence of O2O purchase intention. The physical experience provided to customers is sufficient to make better purchasing decisions. Therefore, businesses are needed to continuously monitor and improve their services in physical stores to provide a better experience for customers. Physical experience has no significant effect on Perceived Risk. This shows that the existence of physical customer experience

does not reduce perceived risk to customers, such as product suitability and data security.

Second, IOOI has an indirect influence on O2O customer behavior, perceived risk, and perceived benefit. Companies need to ensure that online and offline information work side by side and complement each other. With a good combination of online and offline information, customers could understand their products and increase customer satisfaction when shopping using the O2O method. Furthermore, through good integration of online and offline information, customers do not experience difficulties in determining whether their purchase is made online or offline.

Third, perceived benefits are the most influential factor in O2O purchase intention, resulting from a combination of a good physical experience and effective IOOI. Therefore, businesses need to pay attention to how to increase the perceived benefits that customers feel to ensure that they purchase using the O2O method.

The research contributes to the literature by examining O2O customer behavior in the Indonesian context. The academic literature in Indonesia serves as a reference for future studies on the topic of O2O, as research in this area remains limited. However, the research still has limitations, including the fact that it only includes millennial respondents. The sample is also limited to Java, which could result in different outcomes compared to other regions. Additionally, the data are cross-sectional. Thus, it is challenging to identify cause-and-effect relationships.

Future research must consider examining different demographic groups such as other generations such as Gen-Z, and Gen X who exhibits different behaviors than the Millenial Generation. Each generation grow and develop in different periods of technological advancement, which allow for differences in O2O purchasing behavior. Furthermore, future research must consider to include a more diverse sample from several regions to ensure that the results are representative and applicable to a broader context. Future research must examine other demographic areas to understand the variations in customer behavior. Conducting longitudinal studies in future research can provide valuable insights into the cause-effect relationship in O2O customer behavior.

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