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, this study aims to examine the factors influencing purchasing behavior in Indonesian O2O commerce through economic theories, namely Perceived Risk and Perceived Benefit. The study 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 purchase. The results showed that all exogenous variables had significant effects, except for Physical Experience, which did not significantly affect Perceived Risk. Meanwhile, Integration Online-to-Offline (IOOI) had the most significant impact on enhancing customer purchase intention. The results also showed that Perceived Benefit had significant impact to customer purchase intention. This study offered 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 provided valuable insights for companies in formulating strategies to deliver effective physical experiences and IOOI. To maximize customer purchase intention, companies should ensure that the information available across online and offline channels is complementary and consistent.*

Keywords: O2O Purchase Intention, Physical Experience, Integration Online Offline Information, Perceived Benefit, Perceived Risk

I. INTRODUCTION

Online-to-Offline (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 (O. 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 studies, 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 store) still exist. Traditional 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 make purchasing decisions 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 both online and offline store formats, commonly referred to as 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).

O2O business model has great potential since it combines both shopping experience on online and offline channels (C. Wang et al., 2021). In Indonesia, O2O model is currently also increasing, and many companies are starting to implement. 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 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). Quoting from Skystar Capital, 2023, the benefits of the model for business are increasing brand awareness, marketing time efficiency, and maintaining customer trust.

Given the rapid growth of O2O commerce in Indonesia, it is crucial to examine customer behavior within this context. Such studies will contribute valuable insights to the existing body of research, which is 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 Integrated Information of O2O (IOOI)(Yang et al., 2020).

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

Consumers' purchase decisions can be explained from various perspectives, including the economic perspective. This approach suggests that purchase decisions are made based on an evaluation of benefits and costs (or risks) (Shakir et al., 2022; Yang et al., 2020) When the perceived benefits of a purchase outweigh the associated costs or risks, consumers are more likely to proceed with the decision. Benefits are defined as the total of the favorable features or satisfactions offered by a good or service that fulfill 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 referred to as 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 the process of product research and comparison (Arnold & Reynolds, 2003; Desmonda et al., 2024). In the context of O2O commerce, customers can access comprehensive information through both 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 study 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 is what makes PE a critical factor in O2O and gives value added services to O2O customer (Yang et al., 2020). Physical experience refers to the extent to which customers are able to 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 (C. Wang et al., 2021).

By touching and trying products in physical stores, customers gain sensory experiences and additional information, enabling them to make more informed purchasing decisions and reducing 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 following hypothesis can be proposed:

H1 : Physical Experience has negative effect on Perceived Risk

Physical Experience 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 making a purchase (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 an improvements in perceived benefit. Based on these findings, the following hypothesis was 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). Its 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(C. Haridasan et al., 2021). Several studies suggests that customers who perceive higher levels of 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 obtained from both 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 integration of online and offline information (IOOI) increases. Inadequate information may lead to unfavorable outcomes, resulting in dissatisfaction and a sense of loss. Based on these insights, the following hypothesis can be proposed :

H3 : Integration of Online-Offline Information (IOOI) has negative effect on Perceived Risk

IOOI provides consumers with the necessary information infrastructure to take advantage of both 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 both 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 also 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 following hypothesis can be proposed:

H4 : Integration of Online-Offline Information (IOOI) has positive effect on Perceived Benefit

In every purchase transaction decision making, customers will see the benefits received over the risk such as sacrifices, cost, dissatisfaction and even sense of security in purchasing process. Perceived risk of 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 the difficulties in returning the products, and lack of information to make a decision.

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 faced by customers in the purchasing process, the lower the customer's purchase intention. In O2O business model, it is assumed that the risks experienced by customers can be minimized due to the existence of 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, it can be propose the following hypothesis:

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

By increasing the perception of benefit when customers confirm their expectations of the product through O2O model, it gives customers 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 in purchase decision in O2O model. The higher the perceived quality of the product, the greater the willingness to make a purchase in O2O model. (C. Wang et al., 2021). Therefore, the following hypothesis was 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, serves as an illustration of 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, although perceived risk was unexpectedly found to have no significant effect on perceived value. Therefore, the following hypothesis was proposed:

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

II. METHODS

Non-probability and purposive sampling methods were used in this study. The criteria that must be possessed by respondents included (1) those who have made O2O tpurchase transactions in the last 6 months, (2) those aged 27 to 42 years (the millennial generation in Indonesia who were born in 1981 – 1996). The authors selected the millennial generation considering that this age range was already working, digital native, and was classified as productive age. Moreover, based

on result census data 2020 from the Ministry of Education and Culture, the population was the 2nd largest in Indonesia. (https://pskp.kemdikbud.go.id/), (3)Domiciled in Java.

Data was 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- 10 May 2024.

Testing and analysis of data were 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 study, 2 testing elements were 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 that was used in this study was a 1-tailed test with a confidence level of 95% (alpha = 0.05). When the t-value >1.65, showing that the independent variable had a significant relationship with the dependent variable (Hair et al., 2014).

The scale measurements were presented in Table 1.

Table 1 Scale Measurement

Variable		Indicators	Sources
Physical Experience	PE1	I can touch and try the product in Physical Store	(YANG et all, 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 all, 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 all, 2020; Chang et all 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	
	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	
	PR1	O2O commerce purchase is riskier in terms of quality than other methods of shopping.	
	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	
Perceived Risk	PR4	I am concerned about the security and privacy of my personal data if I purchase products via O2O	(YANG et all, 2020; Mukherjee et all, 2021)
	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.	
	PR7	I am worried that the product purchased will not be suitable for me if purchased via O2O method	
	PO1	I am willing to buy products O2O	
	PO2	I intend to buy products O2O	
O2O Purchase Intention	PO3	I intend to shop using an O2O pattern evert time I shop	(YANG et all, 2020; Guo et all 2022)
	PO4	I like O2O way of shopping	

III. RESULTS AND DISCUSSION

The characteristics of respondents were shown in Table 2, consisting of gender, domicile, product, average monthly expense, and education.

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%

A validity and reliability test was conducted on the instruments used in this study. Table 3 presents the results of this test. 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 was greater than 0.40 but less than 0.70, further analysis of the Average Variance Extracted (AVE) was 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 were removed because their values were less than 0.5, resulting in an AVE of less than 0.5.

Table 3 showed that the measurement of validity indicators was according to the criteria. Reliability test results were observed from Cronbach's alpha (CA) and Composite Reliability(CR). When both criteria (CA and CR) values were> 0.7, the study had high reliability (Hair et al., 2014). In addition, for exploratory study, Cronbach's alpha value between 0.60 to 0.70 was acceptable (Hair et al., 2022).

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
IOOI	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

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

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

The multicollinearity test was conducted before the structural model test, to ensure that the latent variables in the model were 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 was considered to have no multicollinearity (Hair et al., 2014). The measurement results in Table 4 showed that there was 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 was 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 showed how much of the construct's variance was explained and was normed between 0 and + 1, the higher the value, the better the construct was explained by the latent variable in the model (Hair et al., 2014). The results of VIF and R-Square were observed in Table 5.

	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			

The results of the full SEM-PLS model used in this study were shown in Figure 1. To measure the significance of the relationship between variables, the hypothesis testing that was used was a 1-tailed test with a confidence level of 95% (alpha = 0.05). When the t-value >1.65 then showed that the independent variable had a significant relationship with the dependent variable (Hair et al., 2014).

Based on the hypotheses test result, Physical Experience had no significant effect on Perceived Risk, as a result, H1 was rejected. However, significant results were observed in other hypotheses, as presented in Table 6.

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

Physical Experience showed no effect on Perceived Risk (β= 0.053, P >0.05), as a result, these results did not support H1, and the hypothesis was rejected. However, Physical Experience showed a significantly positive effect on Perceived Benefit (β= 0.132, P <0.05), these results supported H2. IOOI showed 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 were 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 were supported by H5 and H7. Perceived Benefit showed a significantly positive effect on O2O Purchase Intention (β= -0.436, P <0.05), these results were supported by H6.

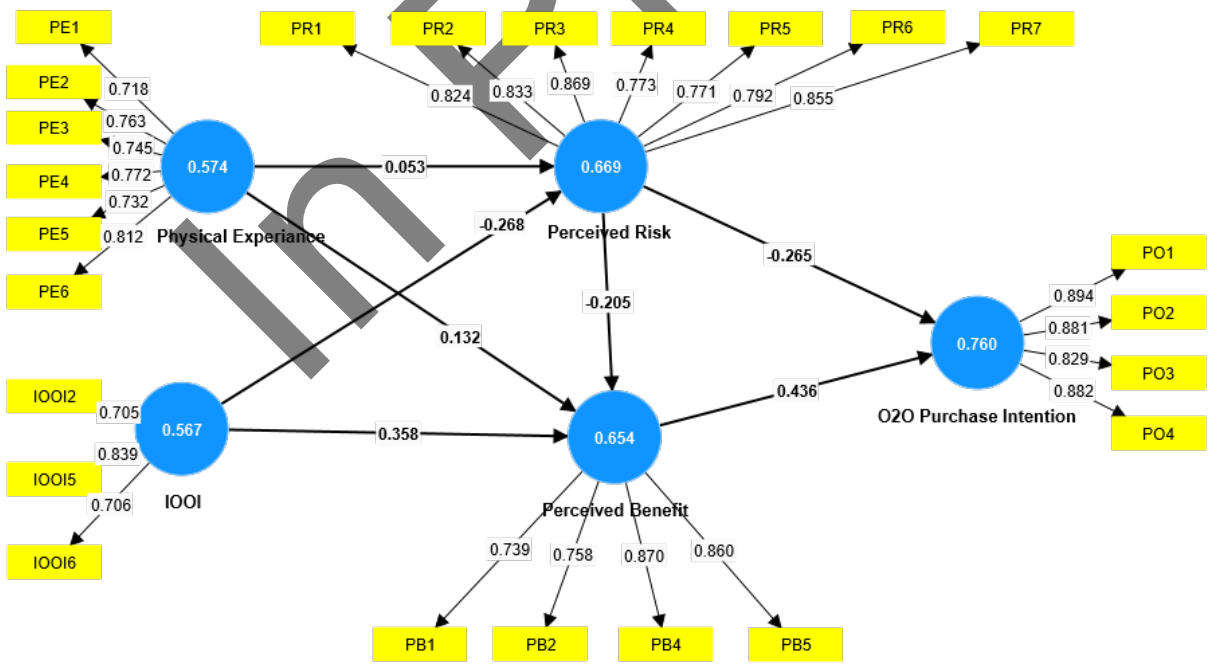

Figure 1 : Full Model
(Outer Loading, AVE, Path Coefficient Result)

The results showed that Physical Experience had no significant effect on Perceived Risk (H1). This result showed that Customers still feel the risk of O2O shopping even when having physical experience. These results were in contrast with a previous study by C. Wang et al. (2021), who explained offering customers offline experience could lower their perception of risk and increase their readiness to buy. Physical Experience was felt by customers when visiting a shop, however, in this study, data processing from the results of respondent questionnaires showed that the risk of disseminating personal data was not reduced by physical experience. In the purchasing process, stores also collected customer data for their database needs such as membership. Therefore, the presence of physical experience did not eliminate the risk perceived by customer.

Although this study found that Physical Experience did not have a significant impact on Perceived Risk, it had a significant positive influence on Perceived Benefits (H2). Respondents in this study felt an increase in the benefits when visiting the store and had experience in the store such as touching, wearing, and trying the product. The positive feeling generated through physical experience of both products could provide enjoyment and satisfaction, thereby improving the perceived benefit. This result was consistent with a previous study by Yang et al (2020), stating that physical experience had a large impact on perceived benefits, and was found to be an important component for customers to engage in O2O trading process. Furthermore, Ram et al (2020) also stated that O2O business model made customers feel the benefits in the shopping process since O2O provided a dual presence which was online and offline channel (Ram et al., 2020).

Interestingly, IOOI was a factor that played an important role in O2O business model in this study. The results showed that it had a negative influence on Perceived Risk (H3). This suggested that when customers obtain information both online and offline, a comprehensive understanding was gained. The gained understanding could reduce their risk perception. As previously argued, information gathered from both online and offline stores provided more knowledge to prevent unfavorable outcomes, leading to a decrease in perceived risk with greater IOOI. This result was consistent with previous studies, stating that integrating promotion, product, and pricing information could reduce availability negative impact on customer retention, and increase customers' perceptions of the value of information (Li et al., 2020).

The results of this study showed that IOOI also had a significant positive influence on Perceived Benefit (H4). This suggested that customers feel more satisfied by shopping using O2O method since more comprehensive information could be gained. Yang et al (2020) stated that customer satisfaction was a significant component of the perceived benefit of O2O commerce. This was also supported by Chang, Hsu, and Yang (2018) who stated quality of O2O system information was able to increase customer satisfaction (Chang et al., 2018).

Perceived Risk had a significantly negative effect on O2O Purchase Intention (H5). This study showed that reducing perceived risk could increase customer intentions in O2O process. When the risk perceived by customer was large enough, customer could cancel purchase transaction. Empirically, this result was consistent with the study by Cho (2004) where the perception of risk affected the likelihood that purchase transaction was canceled. Forsythe et al. (2003), also found that perceived risk negatively predicted purchase intention. In this study, IOOI had a bigger role compared to physical experience in reducing perceived risk.

The results of this study showed that Perceived benefit had a significant positive effect on O2O Purchase Intention (H6). This was supported by Yang et al. (2020), who stated that the benefits perceived by customers could enhance their purchase decision-making. This study showed that customers felt a satisfying shopping experience with O2O concept. As a result, this made customers shop using O2O method. This result was also consistent with Forsythe et al. (2003), who found that perceived benefits positively predicted purchase intention.

Following that, Perceived risk had a significantly negative effect on Perceived Benefit (H7). This result showed that customers assessed the magnitude of the benefits expected by considering the associated risks. Gensler et al (2017) showed that customers considered risk

and benefit factors when making a purchasing decision. As argued, when the total benefits received were greater than the total risks or sacrifices then there could be value received. Yang et al (2020) showed that perceived benefit had a positive effect on perceived value.

The study sample was 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 study were considered representative and relevant to the general understanding of O2O development.

IV. CONCLUSION

In conclusion, after analyzing the results of data processing, the questions in this study were answered and explained. First, Physical experiences had 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. Physical experience provided to customers was sufficient to make better purchasing decisions. Therefore, businesses needed to continuously monitor and improve their services in physical stores to provide a better experience for customers. Physical experience had no significant effect on Perceived risk. This showed that the existence of physical customer experience did not reduce perceived risk to customers such as product suitability and data security.

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

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

This study contributed to the literature by examining O2O customer behavior in the Indonesian context. The academic literature in Indonesia served as a reference for future studies on the topic of O2O, where studies in this area were currently still limited. However, this study still had limitations, including the fact that it only included millennial respondents. The sample was also limited to Java, which could result in different outcomes compared to other regions. Apart from this, this study data was cross-sectional, as a result, it was difficult to identify cause-and-effect relationships.

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

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