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AN EXTENSION TO UTAUT 2 MODEL TO DETERMINE THE ROLE OF AI BASED VOICE ASSISTANT IN ONLINE SHOPPING AMONG WORKING WOMEN

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Abstract

The main objective of the current study was to extend the UTAUT 2 theory (Venkatesh, 2012). In the proposed study, we aimed to moderate the trust factor between behavioral intention and adoption. The further objective of the study was to find out the impact of price value on behavioral intention, performance expectancy on behavioral intention, social influence on behavioral intention, facilitating conditions on behavioral intention, hedonic value on behavioral intention, and ultimately to find out behavioral intention on adoption. The convenience, judgmental & Snowball sampling were used to collect responses from 450 respondent using structured questionnaires. Structural equation model was developed using partial least square method as per the guidelines of (Hair et al, 2019). In the current study, we found that there is an insignificant impact of price value on behavioral intention as the P value is more than 0.05. There is an insignificant impact of social influence on behavioral intention as the P value is more than 0.05. Further, the performance expectancy is also found to have an insignificant impact on behavioral intention. In addition, we found that hedonic value has a positive impact on behavioral intention. There is a significant impact of hedonic value on behavioral intention as the P Value is less than 0.05. Facilitating condition found a significant impact on behavioral intention. Behavioral intention found a positive impact on adoption in online shopping, and trust is a perfect moderator in between behavioral intention and adoption.

Keywords: *Utaut 2, Behavioral Intentions, Adoption, Working Women, Ai-Based Voice Assistant, Online Shopping.*

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Introduction:

Buying stuff online is super easy because we can just click, pay, and it comes to your door. However, sometimes, there are problems like wrong orders or delays that bug people. For women who work, shopping online is a big help. It lets them manage work and life better, and it is helping the economy. More and more working women are doing their shopping online these days. Why? Well, it is because online shopping gives working women some cool advantages. They are not limited to the hours when stores are open they can shop whenever they have free time. There's a vast selection of items that you might not discover in your neighborhood shops. Additionally, it saves time because you can find what you want and buy it online without having to visit a store. For working women, online shopping is not only a matter of preference it benefits the economy as well. It helps businesses grow and makes the marketplace more diverse and inclusive. The Theory of Planned Behavior dives into intentions, attitudes, and norms, giving us a peek into decision-making. The Technology Acceptance Model says we

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either embrace or dodge new tech based on how easy and useful it seems.UTAUT-1 is like the tech acceptance superhero, combining models to understand everything from performance to social influence. UTAUT 2 ads more layers – motivation, price, and habit – diving deep into the complex world of tech adoption. Imagine a future where AI based voice assistants make online shopping hands-free and easy, making it accessible for everyone.

Literature Review and Theory Development:

Price Value

The study with 100 online shoppers in Tangerang found that both promotions and prices influence e-commerce sales, with promotion (X1) and price (X2) values indicating partial and combined effects (R2) of 0.287, 0.148, and 0.144, respectively(Sutikno, S., & Suhartini, S., 2020).The study looked at how online sellers set prices when customers can suggest their own price. It found that when sellers use a flexible pricing approach and tell customers about it, they make more money (over 20% more) without making customers unhappy(Oliver Hinz, II-Horn Hann and Martin Spann, 2011).

Based on the above, we propose following hypothesis: Price value positively affects behavioral intention of working women in online purchase.

Performance Expectancy:

An e-commerce performance assessment model with seven methods, tested in 70 Chinese retailers, highlighting discordance analysis and simple additive weighting as the most effective evaluation approaches.(Jinghua Huang, Ximin Jiang, Qian Tang,, 2009). This study systematically reviewed 155 recent articles to propose an integrated framework for E-commerce performance, revealing three key dimensions influenced by market and organizational E-commerce environments and their dynamic relationships(Hua, N., 2016)

Based on the above, we propose following hypothesis: Performance Expectancy positively affects behavioral intention of working women in online purchase.

Social Influence:

This paper explores the significant influence of social interactions on E-commerce decisions, emphasizing the role of online communities and early adopters in shaping consumer choices. It discusses how E-commerce companies actively utilize social influence data to enhance customer relationship management and boost sales, providing insights and challenges in leveraging these dynamics(Young Ae Kim, Jaideepm Srivastava, 2007). This paper introduces the concept of "social e-shopping" by combining online shopping with social networking, addressing the unmet social needs in e shopping, particularly for women. The study, the first of its kind, reveals that young women prefer social e-shopping sites, emphasizing their enjoyment and usefulness despite some usability challenges (Dennis, Charles; Morgan, Alesia; Wright, Len Tiu; Jayawardhena, Chanaka, 2010).

Based on the above, we propose following hypothesis: Social Influence positively affects behavioral intention of working women in online purchase.

Facilitating Conditions:

This article investigates dimensions of online convenience influencing consumers' intent to use online shopping, revealing that Possession, Transaction, and Evaluation significantly impact convenience for Portuguese young individuals. (Paulo Duarte, Susana Costa e Silva, Margarida Bernardo Ferreira,, 2018). In specific regions of India, the study revealed that performance expectancy, effort expectancy, social influence, and facilitating conditions significantly influence women entrepreneurs' intention to adopt e-commerce, while factors like experience and voluntariness, along with facilitating conditions and behavioral intent, positively impact their actual usage behavior. (Ananya Goswami & Sraboni Dutta, 2016).

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Based on the above, we propose following hypothesis: Facilitating Conditions positively affects behavioral intention of working women in online purchase.

Hedonic Condition:

In the context of e-commerce in Indonesia, the study revealed that utilitarian and hedonic values notably influence customer satisfaction, while social value showed no significant impact. (Tri Yulistyawati Evelina, Andriani Kusumawati, Umar Nimran, Sunarti Sunarti , 2020). This study leveraging the social learning theory unveils a strong connection between utilitarian, hedonic motivation, and e-commerce shopping intentions, especially in the backdrop of the COVID-19 pandemic, accentuating the pivotal role of information searching in predicting online purchase intentions, offering practical implications for e-vendors (Melinda Timea Fülöp, Dan Ioan Topor, Sorinel Căpușneanu, Constantin Aurelian Ionescu & Umair Akram , 2023).

Based on the above, we propose following hypothesis: Hedonic Conditions positively affects behavioral intention of working women in online purchase.

Behavioral Intentions:

This study investigates Indian consumers' inclination to use e-commerce for food and beverage purchases during COVID-19, finding that attitude, subjective norms, and trust significantly shape their intention, while perceived behavioral control does not, offering crucial insights for Indian e-commerce firms amid pandemic-driven shifts in consumer behavior (Hamid, S., Azhar, M. and Sujood , 2023). The study on Shopee e-commerce users in Indonesia highlights that social factors and habits significantly shape behavioral intentions, offering business opportunities for targeted, socially-oriented promotions and providing input for Shopee's platform development (Setiyani, L., Natalia, I., & Liswadi, G. T. , 160–171).

Based on the above, we propose following hypothesis: Behavioral intention positively affects adoption of working women for online purchase.

Adoption:

The study highlights how COVID-19 situational factors and consumer motives impact online fashion purchasing intent, emphasizing the significant influence of pandemic-related challenges and consumer motivations on e-commerce behaviors, aiding online marketers and retailers in strategic platform improvements (Eli Sumarliah, Kamila Usmanova, Kawthar Mousa & Indriya Indriya , 2021). Examining high- versus low-context cultures' impact on e-commerce adoption, this study highlights their influence on employee attitudes toward e-communication and strategic decisions within firms, shedding light on how organizational culture and technological orientation shape e-commerce adoption. (Hayat Kabasakal , Gulden Asugman & Kazim Develioğlu , 2006)

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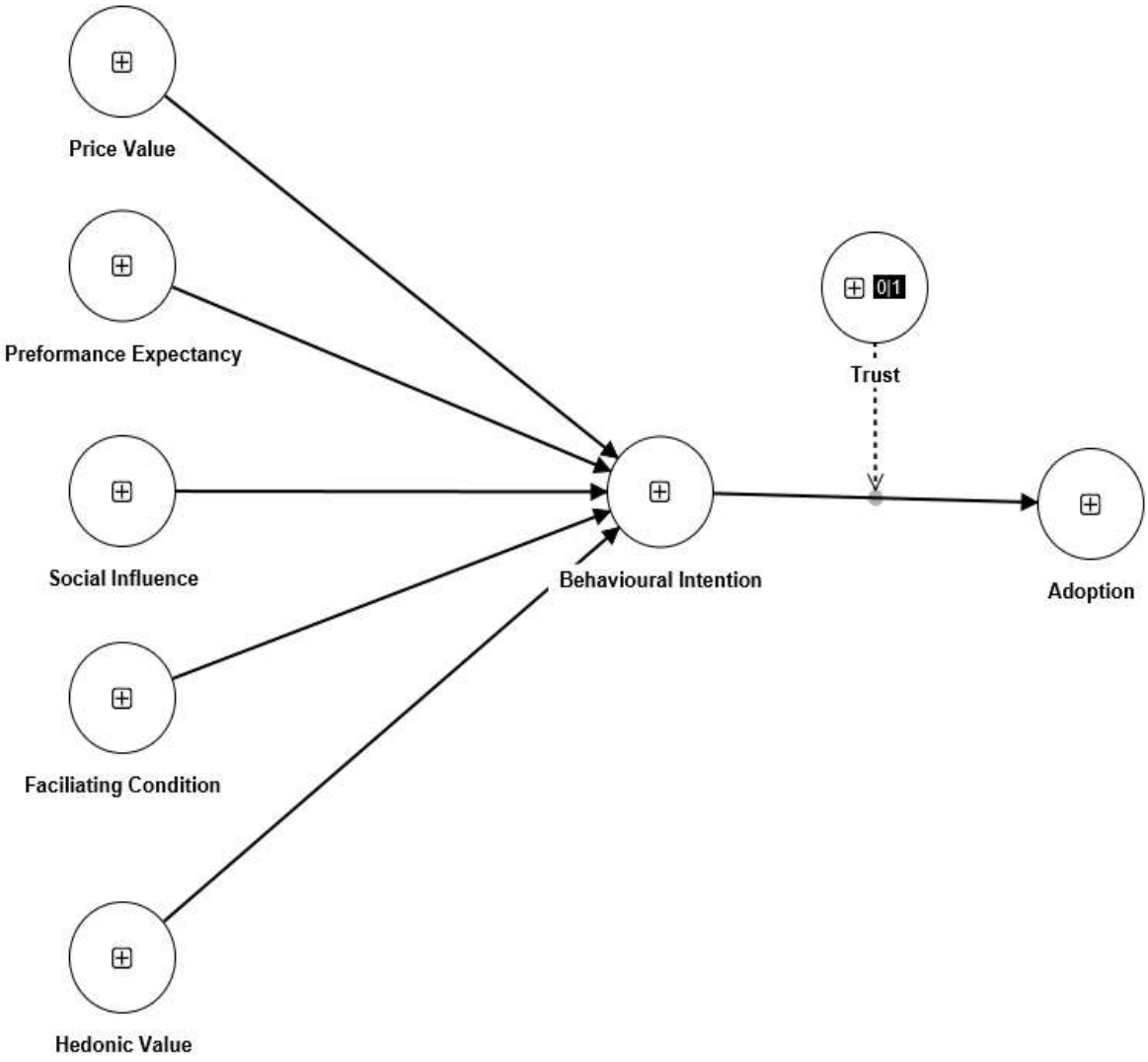

FIGURE 1 THE PROPOSED CONCEPTUAL MODEL

Research Methodology:

Type of research: The proposed research is quantitative and exploratory in nature. In the current research, we tried to develop relationship between various independent and dependent variable to develop new phenomena. The structured questionnaire was used to collect data, which makes current study as a quantitative study. The study tried to extent UTAUT 2 theory by adding trust as a moderating variable. Sampling method: The convenience, judgmental & Snowball sampling were used to collect responses from 450 respondent using structured questionnaires. Data Measurement: Validated scale of UTAUT2 (Price value, Performance Expectancy, Social Influence, facilitating conditions, Hedonic value, Behavioral Intentions and adoption) were measured by same items used by Venkatesh et al. (2012). Structural equation model was developed using partial least square method as per the guidelines of (Hair et al, 2019).

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Table 1 Convergent validity

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
Behavioral Intention	0.629	0.802	0.576
Facilitating Condition	0.593	0.785	0.55
Hedonic Value	0.603	0.791	0.561
Performance Expectancy	0.524	0.749	0.505
Price Value	0.682	0.825	0.612
Social Influence	0.597	0.786	0.551
User Behavior	0.611	0.791	0.558

Table 1 shows the result of convergent validity. The factor loading of individual item was more than 0.708 (Hair et al, 2019). Factor loading eliminates the chances of multicollinearity. The value of composite reliability was more than 0.70 (Hair et al, 2019). The AVE is more than 0.50 (Hair et al, 2019).

Table 2 Forner-Larcker

	Behavioral Intention	Facilitating Condition	Hedonic Value	Performance Expectancy	Price Value	Social Influence	User Behavior
Behavioral Intention	0.759						
Facilitating Condition	0.673	0.741					
Hedonic Value	0.574	0.603	0.749				
Performance Expectancy	0.555	0.582	0.517	0.711			
Price Value	0.479	0.478	0.444	0.598	0.783		
Social Influence	0.538	0.62	0.649	0.576	0.447	0.742	
Adoption	0.741	0.588	0.605	0.514	0.458	0.505	0.747

Table 2 shows the result of Forner-Larcker criterion. The value of each construct is unique in its own row and column, which means construct, is unique to the other construct (Hair et al, 2019).

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Table 3 HTMT Ratio							
	Behavioral Intention	Facilitating Condition	Hedonic Value	Performance Expectancy	Price Value	Social Influence	User Behavior
Behavioral Intention							
Facilitating Condition	0.983						
Hedonic Value	0.932	0.922					
Performance Expectancy	0.911	0.853	0.936				
Price Value	0.726	0.734	0.694	0.972			
Social Influence	0.852	0.988	0.864	0.716	0.676		
User Behavior	0.969	0.919	0.857	0.826	0.709	0.797	

Table 3 shows the result of HTMT ratio. The HTMT value of each construct was less than 0.85 (Hair et al, 2019) and can be 1 (Gold et al, 2001). Hence, convergent reliability established.

Table 4 R square		
	R-square	R-square adjusted
Adoption	0.557	0.551
Behavioural Intention	0.527	0.516

Table 4 shows the result of R-square and adjusted R-square. The R-square of adoption and behavioral intention is 0.557 and 0.527 respectively

Table 5 Model fit		
	Saturated model	Estimated model
SRMR	0.094	0.098

Table 6 Hypothesis Testing					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Social Influence ->Behavioral Intention	0.041	0.056	0.092	0.439	0.661
Price Value ->Behavioral Intention	0.101	0.109	0.08	1.27	0.204
Performance Expectancy ->Behavioral Intention	0.138	0.139	0.108	1.279	0.201
Hedonic Value ->Behavioral Intention	0.187	0.182	0.084	2.238	0.025
Facilitating Condition ->Behavioral Intention	0.406	0.392	0.089	4.571	0.00
Behavioral Intention ->Adoption	0.741	0.743	0.033	22.525	0.00
Trust x Behavioral Intention -> Adoption	-0.162	-0.152	-0.354	25.23	0.045

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Table 5&6 shows the assessment result of structural model, conducted as per the guidelines provided by (Hair et al, 2009). The VIF value was more than 3.33 indicating no collinearity issue in the model. Table 7 shows the result of hypothesis testing. We found that there is an insignificant impact of price value on behavioral intention as the P value is more than 0.05. There is an insignificant impact of social influence on behavioral intention as the P value is more than 0.05. Further, the performance expectancy is also found to have an insignificant impact on behavioral intention. In addition, we found that hedonic value has a positive impact on behavioral intention. There is a significant impact of hedonic value on behavioral intention as the P Value is less than 0.05. Facilitating condition found a significant impact on behavioral intention. Behavioral intention found a positive impact on adoption in online shopping, and trust is a perfect moderator in between behavioral intention and adoption.

Annexure A shows the result of discriminant validity. It is found that there is no cross loading present. Hence convergent and discriminant validity has been established.

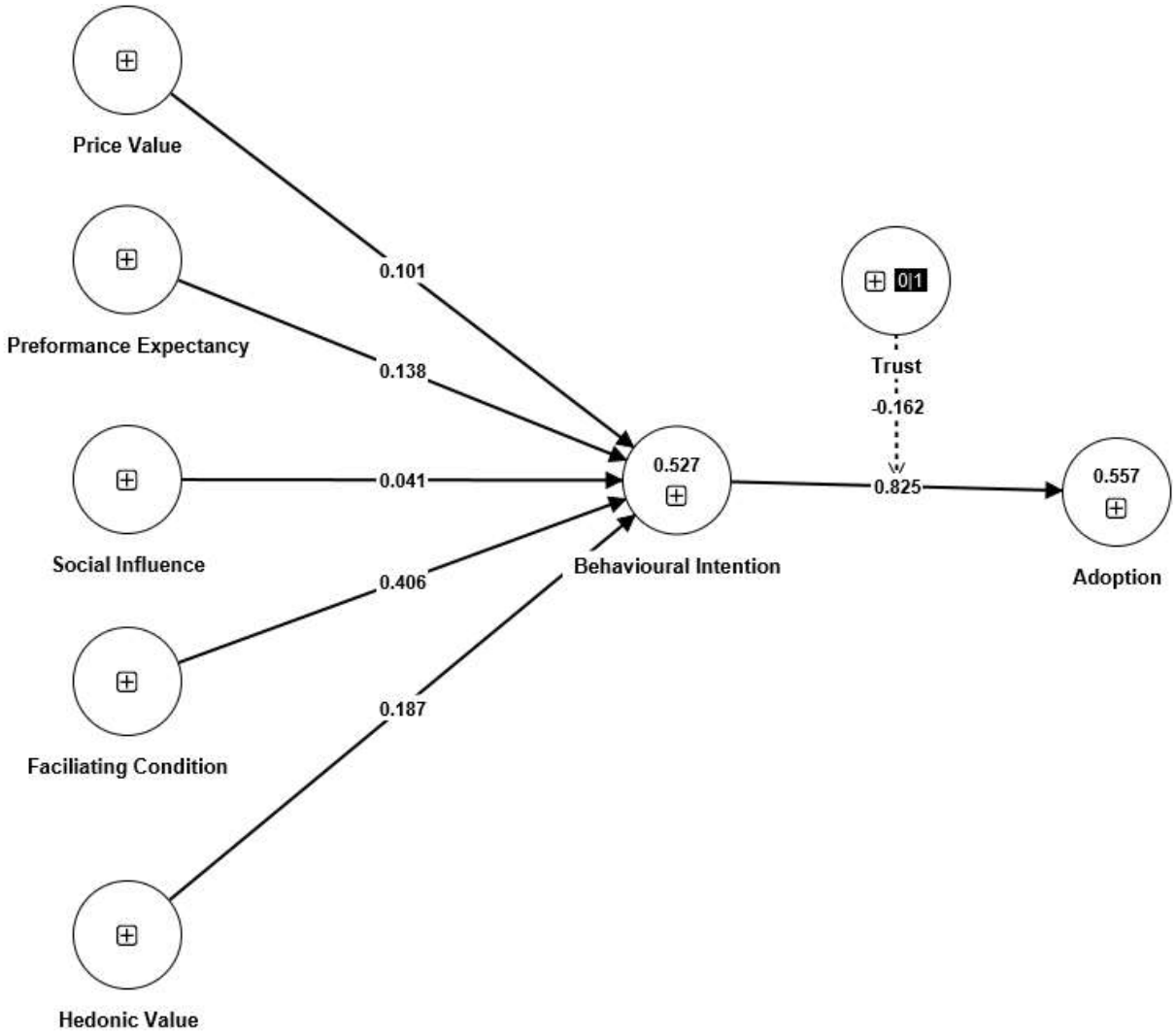

FIGURE 2 STRUCTURAL MODEL ASSESMENT

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Findings:

The objective of the current study was to extend the UTAUT 2 theory (Venkatesh, 2012). In the proposed study, we aimed to moderate the trust factor between behavioral intention and adoption. The further objective of the study was to find out the impact of price value on behavioral intention, performance expectancy on behavioral intention, social influence on behavioral intention, facilitating conditions on behavioral intention, hedonic value on behavioral intention, and ultimately to find out behavioral intention on adoption. In the current study, we found that there is an insignificant impact of price value on behavioral intention as the P value is more than 0.05. There is an insignificant impact of social influence on behavioral intention as the P value is more than 0.05. Further, the performance expectancy is also found to have an insignificant impact on behavioral intention. In addition, we found that hedonic value has a positive impact on behavioral intention. There is a significant impact of hedonic value on behavioral intention as the P Value is less than 0.05. Facilitating condition found a significant impact on behavioral intention. Behavioral intention found a positive impact on adoption in online shopping, and trust is a perfect moderator in between behavioral intention and adoption.

Implication:

Our first implication is to improve the communication of price value to online shoppers, addressing the insignificant impact found in the study. Clear and transparent pricing information can positively influence behavioral intention by using AI based voice assistant. Our second implication involves employing effective social influence strategies in online platforms. Despite the initial insignificance, optimizing social influence elements can potentially impact behavioral intention and foster a sense of community among users.

Conclusion:

In the current study, we found that there is an insignificant impact of price value on behavioral intention as the P value is more than 0.05. There is an insignificant impact of social influence on behavioral intention as the P value is more than 0.05. Further, the performance expectancy is also found to have an insignificant impact on behavioral intention. In addition, we found that hedonic value has a positive impact on behavioral intention. There is a significant impact of hedonic value on behavioral intention as the P Value is less than 0.05. Facilitating condition found a significant impact on behavioral intention. Behavioral intention found a positive impact on adoption in online shopping, and trust is a perfect moderator in between behavioral intention and adoption.

References:

Ananya Goswami & Sraboni Dutta. (2016). *E-Commerce Adoption by Women Entrepreneurs in India: An Application of the UTAUT Model.* Macrothink Institute: Business and Economic Research.

Bettina Berendt, O. G. (2005). *Privacy in e-commerce: stated preferences vs. actual behavior.* New York, NY, United States: Association for Computing Machinery .

Dennis, Charles; Morgan, Alesia; Wright, Len Tiu; Jayawardhena, Chanaka. (2010). The influences of social e-shopping in enhancing young women's online shopping behaviour. *Journal of Customer Behaviour, Volume 9, Number 2,* , 151-174.

Eli Sumarliah, Kamila Usmanova, Kawthar Mousa & Indriya Indriya . (2021). *E-commerce in the fashion business: the roles of the COVID-19 situational factors, hedonic and utilitarian motives on consumers' intention to purchase online.* International Journal of Fashion Design.

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OPEN ACCESS Original Research Article

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems,18(1)* , 185-214.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review(31)* , 2-24.

Hamid, S., Azhar, M. and Sujood . (2023). *Behavioral intention to order food and beverage items using e-commerce during COVID-19: an integration of theory of planned behavior (TPB) with trust.* Emerald: British Food Journal.

Hayat Kabasakal , Gulden Asugman & Kazim Develioğlu . (2006). *The role of employee preferences and organizational culture in explaining e-commerce orientations.* The International Journal of Human Resource Management.

Hua, N. (2016). E-commerce performance in hospitality and tourism. *International Journal of Contemporary Hospitality Management, Vol. 28 No. 9* , 2052-2079.

Jinghua Huang, Ximin Jiang, Qian Tang,. (2009). An e-commerce performance assessment model: Its development and an initial test on e-commerce applications in the retail sector of China. *Information & Management Volume 46, Issue 2* , Pages 100-108.

Melinda Timea Fülöp, Dan Ioan Topor, Sorinel Căpușneanu, Constantin Aurelian Ionescu & Umair Akram . (2023). *Utilitarian and Hedonic Motivation in E-Commerce Online Purchasing Intentions.* Eastern European Economics.

Oliver Hinz, II-Horn Hann and Martin Spann. (2011). Price Discrimination in E-Commerce? An Examination of Dynamic Pricing in Name-Your-Own Price Markets. *Management Information Systems Research Center, University of Minnesota* , 81-98.

Paulo Duarte, Susana Costa e Silva, Margarida Bernardo Ferreira,. (2018). How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services,* , 161-169.

Setiyani, L., Natalia, I., & Liswadi, G. T. . (160–171). *Analysis of Behavioral Intentions of E-Commerce Shopee Users in Indonesia Using UTAUT2 Authors* . Indonesia: ADI Journal on Recent Innovation.

Sreenivasa, B.R., Nirmala. (2019). *Hybrid location-centric e-Commerce recommendation model using dynamic behavioral traits of customer.* Iran: Iran Journal of Computer Science.

Sutikno, S., & Suhartini, S. (2020). Price Strategies And Promotions Which E-Commerce Does In Sales. *Jurnal Ekonomi & Bisnis, 18(3)* , 113–124.

Tri Yulistyawati Evelina, Andriani Kusumawati, Umar Nimran, Sunarti Sunarti . (2020). *THE INFLUENCE OF UTILITARIAN VALUE, HEDONIC VALUE, SOCIAL VALUE, AND PERCEIVED RISK ON CUSTOMER SATISFACTION: SURVEY OF E-COMMERCE CUSTOMERS IN INDONESIA* . Verslas: teorija ir praktika.

Venkatesh, V., Thong, J. Y. L., and Xu, X. (2012). *Consumer acceptance and use of* . MIS Quarterly, 36(1).

Young Ae Kim, Jaideepm Srivastava. (2007). Impact of social influence in e-commerce decision making. *ICEC '07: Proceedings of the ninth international conference on Electronic commerce* , 293–302.

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ANNEXURES

Annexure A:

Annexure A Discriminant validity - Cross Loading							
	Behavioral Intention	Facilitating Condition	Hedonic Value	Performance Expectancy	Price Value	Social Influence	Adoption
BC_1	**0.672**	0.484	0.382	0.363	0.326	0.334	0.497
BC_2	**0.777**	0.495	0.474	0.448	0.357	0.418	0.551
BC_3	**0.821**	0.55	0.45	0.447	0.404	0.464	0.632
FC_1	0.539	**0.735**	0.479	0.516	0.418	0.513	0.558
FC_2	0.541	**0.808**	0.455	0.461	0.377	0.431	0.436
FC_3	0.396	**0.676**	0.402	0.284	0.246	0.434	0.278
HC_1	0.376	0.4	**0.646**	0.359	0.315	0.427	0.469
HC_2	0.434	0.457	**0.771**	0.431	0.315	0.529	0.41
HC_3	0.474	0.492	**0.819**	0.372	0.365	0.5	0.484
PE_1	0.419	0.409	0.311	**0.726**	0.443	0.411	0.367
PE_2	0.48	0.48	0.442	**0.82**	0.5	0.42	0.482
PE_3	0.227	0.346	0.37	**0.562**	0.3	0.448	0.173
PV_1	0.419	0.409	0.336	0.482	**0.839**	0.355	0.348
PV_2	0.374	0.365	0.387	0.482	**0.799**	0.392	0.396
PV_3	0.324	0.346	0.321	0.442	**0.703**	0.3	0.334
SI_1	0.388	0.398	0.474	0.452	0.361	**0.706**	0.426
SI_2	0.307	0.409	0.447	0.337	0.215	**0.691**	0.244
SI_3`	0.478	0.555	0.523	0.477	0.391	**0.824**	0.426
ADB_1	0.646	0.553	0.423	0.4	0.317	0.449	**0.763**
ADB_2	0.528	0.404	0.459	0.475	0.422	0.329	**0.751**
ADB_3	0.458	0.323	0.487	0.261	0.289	0.334	**0.725**

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