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The Effect of Gamification and Technology Acceptance Model (TAM) towards Intention to Buy in Online Travel Agent Traveloka

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Abstract. *These days, it can be seen that the world's population keeps on rising. This growth in population has different effect in different sectors, including the tourism sector – especially in the accommodation and transportation sectors. In order to fulfill this demand, travel agent emerge as an organization who helps consumer during their trip. With the emerge of digitalization in every single aspect of lives, these days people prefer to use an Online Travel Agent (OTA) to help them with their trip. The study's objective is to determine if the online travel agency Traveloka's use of gamification and the Technology Acceptance Model influences consumers' desire to make a purchase. SPSS was used for data analysis in this study. Research shows that gamification has a sizeable impact on purchase desire in the online travel agency Traveloka. Evidently, TAM also has a substantial impact on consumers' desire to make a purchase through OTA Traveloka.*
Keywords: *Gamification, Technology Acceptance Model (TAM), Traveloka*

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INTRODUCTION

These days, it can be seen that the world's population keeps on rising. Based on the data that was taken from worldometers. info, the world's population is experiencing an average of 1% increase every single year.

Table 1. World Population

Year (July 1)	Population	Yearly % Change	Yearly Change	Median Age	Fertility Rate	Density (P/Km²)
2020	**7,794,798,739**	1.05 %	81,330,639	30.9	2.47	52
2019	**7,713,468,100**	1.08 %	82,377,060	29.8	2.51	52
2018	**7,631,091,040**	1.10 %	83,232,115	29.8	2.51	51
2017	**7,547,858,925**	1.12 %	83,836,876	29.8	2.51	51
2016	**7,464,022,049**	1.14 %	84,224,910	29.8	2.51	50
2015	**7,379,797,139**	1.19 %	84,594,707	30	2.52	50

This increase in world's population also has an effect in the tourism sector, especially in the number of tourists that decides to travel to different tourism spots. Based on the statistic that was taken from data.worldbank.org, it can be seen that the number of international departures is increasing. From 1,93 Billion departure in 2017, to 1,99 Billion departures in 2018 and 2,03 Billion departures in 2019. Based on this data it can be inferred that the number of travelers that decided to depart to a certain tourism spot is also increasing.

This increase in the number of travelers also automatically increase the number of needs for tourism accommodation. In this modern day, in order to make traveler easier people would often opt to use the travel agent service and with digitalization in every single aspect of our lives, it is only natural for people to utilize online travel agent or OTA to make different reservations during their trip or holiday. In Indonesia, there are numerous online travel agent platform. Some of the biggest OTA platform are Traveloka, Tiket.com, Booking.com, Agoda.com and many more.

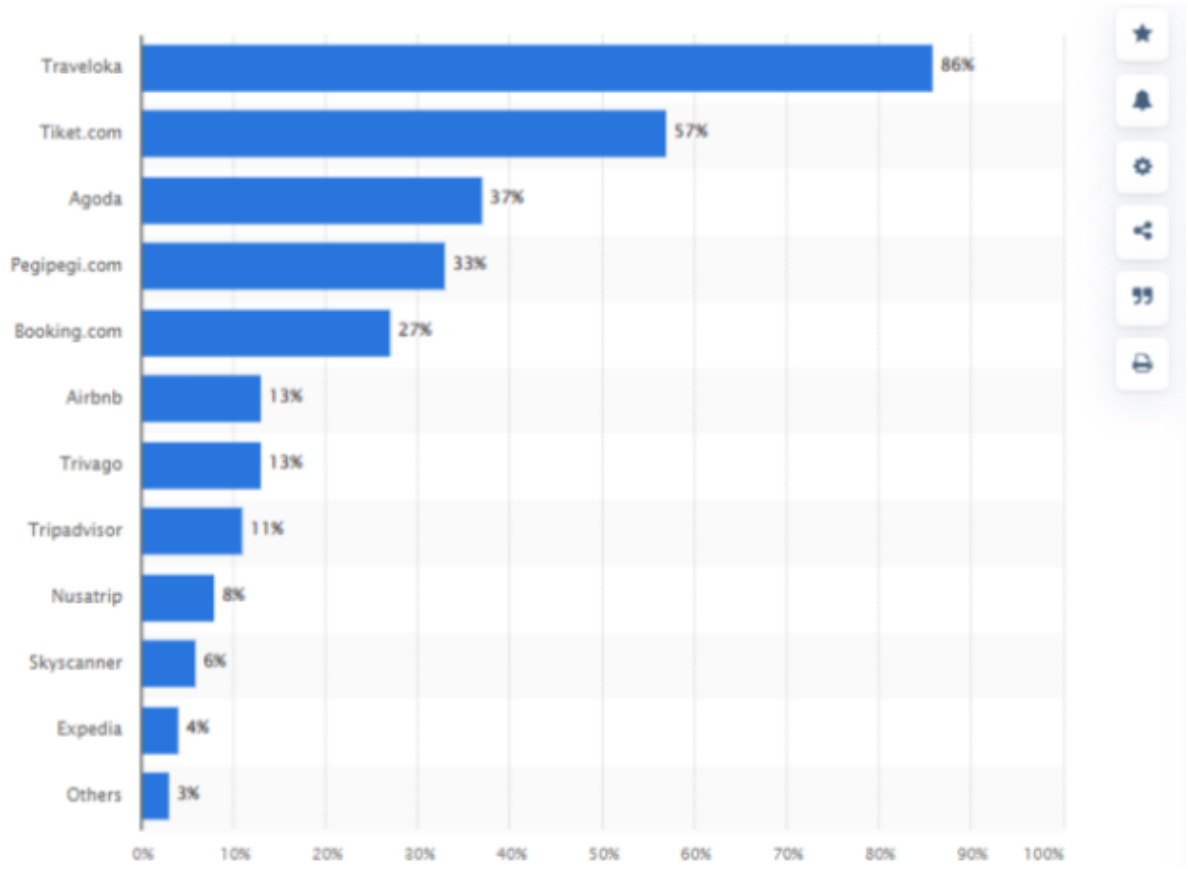

Figure 1. Most Popular OTA in Indonesia

According to the data presented above, Traveloka is the preferred internet travel agency for most Indonesian consumers. As a result, the research subjects in this study will be Traveloka.

There are a number of variables besides gamification that can influence a consumer's intent to purchase. The term "gamification" refers to the incorporation of game mechanics and aesthetics into non-gaming settings (Deterding et al, 2011). Aulia et al., who conducted the study, noted that gamification influences consumers' desire to purchase (Aulia et al, 2021). In addition to gamification, other variables, such as the TAM, influence consumers' intent to purchase.

Perceived usefulness and perceived simplicity of use are the two components of the Technology Acceptance Model Theory, developed by Kei and Chaichi (Kei and Chaichi, 2021). Wijaya and Susilo discovered that TAM does affect consumers' decision to make purchases through online travel agencies. Taking into account that Traveloka is Indonesia's favorite OTA and is also a gaming site. The goals of this study are twofold: (1) to determine if there is a correlation between gaming and purchase intent on Traveloka, and (2) to determine if there is a correlation between the Technology Acceptance Model and purchase intent on Traveloka.

Literature Review

Here we will talk about the factors like the Technology Acceptance Model, Gamification, and Purchase Impulse that are used in this study. One definition of "intention to buy" is "the consumer's expressed desire to make a transaction" (Hajli in Pasharibu et al, 2020). Intent to

purchase, as defined by Schiffman and Kanuk in Pasharibu et al. (2020), is an appropriate measure of customer sentiment toward products and services. Additionally, Schiffman and Kanuk in Pasharibu et al. (2020) mentioned that five indicators can be used to measure intent to purchase, including (1) interest in learning about a related product, (2) consideration to purchase, (3) interest in trying the product, (4) interest in learning about the product, and (5) interest in owning the product. Transactional interest (the propensity to make a purchase), referral interest (the propensity to recommend the product to others), preference interest (the propensity to use the product more often than others), and exploratory interest (the propensity to learn more about the product) (Ferdinand in Pasharibu et al., 2020). The term "intention to buy" refers to the state of mind a customer is in before making a final decision to buy. These claims are corroborated by studies cited in Pasharibu et al. (2020), such as those conducted by Nurvidiana et al., Putra et al., Septifani et al., and others.

The word "gamification" (Marczewski in Aulia et al., 2021) first appears in the early 2000s, and its popularity skyrockets beginning in the early 2010s (Deterding et al. ; Werbach and Hunter in Aulia et al., 2021). Gamification, as stated by Seaborn and Feels, serves to inspire real-world behavior or ideas through the provision of an experience outside of the traditional gaming context (Seaborn and Feels in Aulia et al, 2021).

Owen writes in Aulia et al. (2021) that gamification is the process of incorporating elements of game design into non-gaming contexts. Wicaksono and Subari (2021) identify motivation and consumer participation as two facets of gamification. Broer and Poeppelbuss, in Wicaksono and Subari (2021), state that there are two types of motivation: internal and extrinsic. The desire to take part in an activity out of pure personal pleasure, rather than with an eye toward financial gain, is an example of an intrinsic motive. An extrinsic motivation, on the other hand, is one that motivates a person to act in a certain way so that they can reap some sort of external reward (Deci & Ryan in Wicaksono & Subari, 2021). Users' interest can be piqued through gamification by appealing to their "intrinsic motivation," which can include characteristics like eagerness to take part, natural curiosity, and so on. Consumer engagement can be gauged via gamification, social media, online world, and website. To wit: (Gatautis et al., 2021).

Numerous studies have examined how game elements affect consumers' propensity to make a purchase. De Canio, Fuentes-Blasco, and Martinelli (2021) conducted the first study and found that gamification has a beneficial impact on consumers' intent to make a purchase. Al-Zyoud (2021) conducted an additional study and came to the same conclusion: gaming influences consumers' propensity to make a purchase.

In this context, TAM refers to the Technology Adoption Model. Which Lederer et al. in Wijaya & Susilo (2021) TAM imply that convenience and utility forecast the app's adoption and use. The degree to which a user embraces and makes effective use of a given technology is often evaluated using this paradigm. Indicators of perceived usefulness and perceived simplicity of use are the building blocks of the Technology Acceptance Model, as described by Pavlou in Wijaya & Susilo (2021). In this context, "how far someone believes in using the system to improve his or her productivity in working" is an acceptable working definition of "perceive usefulness" (PU).

The term "perceived ease of use" (PEOU) is used to describe a user's confidence in the system's intuitiveness. Several studies have examined how the TAM influences consumers' propensity to make a purchase. First, we have study by Falahuddin and Widiartanto (2020), and we can infer that the indicator of ease of use in the TAM variable has a substantial effect towards intention to purchase. Widhiani and Idris (2018) cited similar findings, noting that the indicator of user-friendliness in the TAM variable also has a substantial impact towards purchase intent. Udayana and Ramadhan (2019) discovered that the indicator Perceive Usefulness in the TAM variable significantly affects Purchase intent. The same result is drawn from the work of Japarianto and Anggono (2020), who discover that the predictor Perceived Usefulness in the TAM variable influences purchase intent.

This is a suggested research model based on the above discussion:

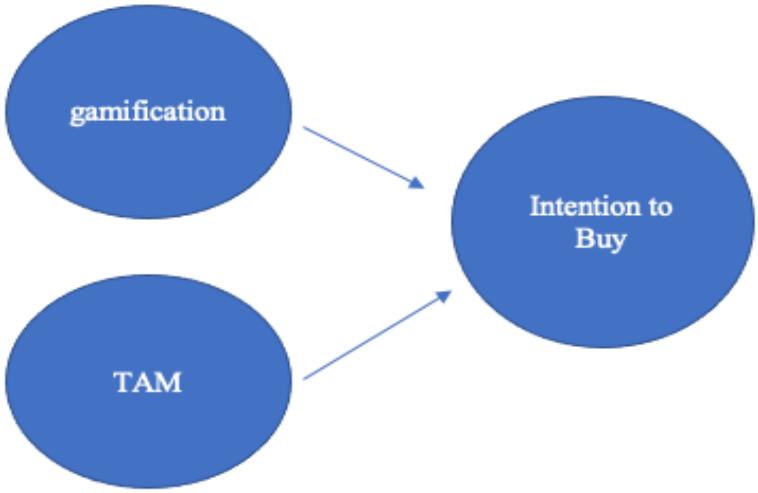

Figure 2. Research Model

This study makes two hypotheses based on the aforementioned model and the previous talks. We can categorize these ideas as; (1) Consumers' desire to purchase is affected by gamification in Traveloka; (2) the Traveloka Technology Acceptance Model (TAM) significantly affects consumers' desire to purchase.

Methods

The population for this research is someone who has the intention to use Traveloka and has tried or know about the gamification (games with present) that is owned by Traveloka. While the sample that is used in this research is someone who has the intention to use Traveloka and has tried or know about the gamification (games with present) that is owned by Traveloka in Indonesia. This sample uses Hair et al. sampling method, and the number of sample used in this research was 150 samples. This research uses primary data that was taken using questionnaire and measured using a 5-point likert scale. The data which was collected from the questionnaire will then be analysed by using SPSS software and examined using several tests, namely validity test, reliability test, t-test, classical assumption test, and the R2 test.

Results and Discussion

Based on the test that had been done, the result of the test can be seen in the discussion below. The first test that was done in this research was validity test. Followed by reliability test, classical assumption test, and the regression test. Validity test is used to determine whether the instruments or questionnaire that was used in this research is valid or not. For validity test, this research uses a Pearson Correlation in which to be categorized as valid, the sig. score should be below 0.05.

Table 2. Validity Test Result

Variable	Statements	Sig. Score	Remarks
Gamification	X1.1	0,000	Valid
	X1.2	0,000	Valid
	X1.3	0,000	Valid
	X1.4	0,000	Valid
	X1.5	0,000	Valid
	X1.6	0,000	Valid
	X1.7	0,000	Valid
	X1.8	0,000	Valid
	X1.9	0,000	Valid

	X1.10	0,000	Valid
Technology Acceptance Model	X2.2	0,000	Valid
	X2.3	0,000	Valid
	X2.4	0,000	Valid
	X2.5	0,000	Valid
	X2.6	0,000	Valid
	X2.7	0,000	Valid
Intention to buy	Y.1	0,000	Valid
	Y.2	0,000	Valid
	Y.3	0,000	Valid
	Y.4	0,000	Valid

Based on table above, it can be seen that each questions used in this research has a sig. score 0,000 which is below 0,05. Therefore, it can be concluded that all the indicators used in this research is valid.

Reliability test is used to determine whether the instruments or questionnaire that was used in this research is reliable or not. For reliability test, this research uses Cronbach alpha in which to be categorized as reliable, the Cronbach alpha score should be below 0.6.

Table 3. Reliability test result

Variable	Cronbach alpha	Remarks
Gamification (X1)	0,916	Reliable
Technology Acceptance Model	0,918	Reliable
Intention to Buy	0,845	Reliable

Based on the reliability test result above, it can be seen that the Cronbach alpha score for each variable is bigger than 0,6. Therefore it can be concluded that the indicators used in this research is reliable. In this research, the classical assumption test is divided into 4 tests: Linearity Test, Multicollinearity test, Normality test and Heteroskedasticities test. In the linearity test, in order for the data used in this research to be categorized as linear, the significance (Sig.) score should be below 0.05.

Table 4. Linearity test for Gamification and Intention to Buy

			Sum of Squares	**df**	***Mean Square***	**F**	**Sig.**
*Intention To Buy * Gamfication*	*Between Groups*	*(Combined)*	67.387	33	2.042	3.221	.000
		Linearity	47.227	1	47.227	74.495	.000
		Deviation from Linearity	20.160	32	.630	.994	.487
	Within Groups		73.540	116	.634		
	Total		140.927	149			

Table 5. Linearity test for Technology Acceptance Model (TAM) and Intention to Buy (Y)

			Sum of Squares	**df**	***Mean Square***	**F**	**Sig.**
*Intention To Buy * Technology Acceptance Model*	*Between Groups*	*(Combined)*	60.058	21	2.860	4.527	.000
		Linearity	45.142	1	45.142	71.452	.000
		Deviation from Linearity	14.916	20	.746	1.180	.282
	Within Groups		80.869	128	.632		
	Total		140.927	149			

It is clear from the table that neither the Technology Acceptance Model nor the Intention to Buy variable has a linearity value of more than 0.000. It can be inferred that the data used in this study is linear because 0.000 is less than 0.05.

In the multicollinearity test used in this research, the VIF score needs to be less than 10 in order to be categorized as free from multicollinearity.

Table 6. Multicollinearity Test Result

Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.	*Collinearity Statistics*	
		B	*Std. Error*	Beta			*Tolerance*	*VIF*
1	*(Constant)*	1.413	.244		5.796	.000		
	Gamification	.373	.091	.361	4.104	.000	.537	1.863
	Technology Acceptance Model	.308	.085	.320	3.644	.000	.537	1.863

This study does not suffer from multicollinearity because all independent variables have VIF scores of less than 10, as shown in the table above.

For Normality test, this research uses the One Sample of Kolmogrov-Smirnov (K-S) test with the result of the Assymp 2-Tailed score should be above 0.05 in order for the data to be considered as distributed normally and can be used in this research.

Table 7. Normality Test Result

		Unstandarized Residual
N		
Normal Parameters[a,b]	*Mean*	0E-7
	Std. Deviation	.75944992
Most Extreme Differences	*Absolute*	.081
	Positive	.081
	Negative	-.052
Kolmogorov-Smirnoff Z		.995
Assymp. Sig. (2-Tailed)		.275

We can see that the assymp. Sig. Score was 0.275, which is significantly higher than the significance level of 0.05 indicated by the chart above. Therefore, the data used in this study has a regular distribution.

The heteroskedasticity test in this research uses the Spearman Rank test in which to be considered free from heteroskedasticity, the significance coefficient score should be above 0.05.

Table 8. Heteroscedasticity Test Result

			Gamification	*Technology Acceptance Model*	*Unstandardized Residual*
Spearman's Rho	*Gamification*	*Correlation Coefficient*	1.000	.634**	0.75
		Sig. (2-tailed)	.	.000	.363
		N	150	150	150
	Technology Acceptance Model	*Correlation Coefficient*	.634**	1.000	.135
		Sig. (2-tailed)	.000	.	.101

		N	150	150	150
	Unstandardized Residual	*Correlation Coefficient*	0.75	.135	1.000

Using the data in the chart above, we can deduce that the value of the correlational significance test was greater than.05. Therefore, heteroscedasticity does not impact the data used in this study. t-Test in this research is being used to determine whether the independent variables has an effect towards dependent variable . The result of the t-Test in this research can be seen below.

Table 9. t-Test Result

Model		*Unstandardized Coefficient*		T	Sig
		B	Std. Error		
1	*(Constant)*	1.413	.244	5.796	.000
	Gamification	.373	.091	4.104	.000
	Technology Acceptance Model	.308	.085	3.644	.000

Based on the table above it can be concluded that; (1) The Sig. Score for gamification variable is 0,000 which is below 0,05. Therefore it can be concluded that gamification has a significant effect towards intention to buy; (2) The Sig. Score for Technology Acceptance Model is 0,000 Which is below 0,05. Therefore it can be concluded that Technology acceptance model has a significant effect towards intention to buy. Coefficient determination test or (R^2) result is used to determine how much does the independent variables affect the dependent variable. The result of the Coefficient determination can be seen below.

Table 10. R. Square Result

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.625[a]	.390	.382	.76460

We can see that the adjusted R2 value is 0.382, or 38.2%, in the table up top. This demonstrated that gamification and the tao of technology adoption influenced consumer intent to purchase by 38.2%. While additional factors account for the remaining 61.8%.

All of the study hypotheses are accepted, including the two that were stated above. The sig. value for the gamification variable is 0.000, which is less than 0.05, as shown by the t-Test result. It follows that gaming must have a sizable impact on consumers' propensity to make a purchase. Rakhmanita's (2022) finding that there is a substantial relationship between gamification and intention to buy is supported by these findings. The t-Test result also shows that the sig. score for the TAM variable is 0.000, which is significantly lower than the significance level of 0.05. It follows that TAM must have a substantial impact on a consumer's propensity to make a purchase. Since Maskuri et al. (2019) also discovered that TAM affects consumers' propensity to make a purchase, our findings corroborate theirs.

CONCLUSION

The findings of the above experiments show that both gamification and the TAM variable have a substantial impact on consumers' intent to make a purchase. Internet travel agencies like Traveloka could benefit from adding elements of game design to their platforms in order to increase their user base and encourage existing customers to discover new features. The impact of TAM on intent to purchase follows naturally from the findings above; in other words, the more accessible and useful an OTA's apps are, the more likely a user is to be interested in making a purchase or booking through that service.

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