

# The Phenomenon of Brand Tribalism in Online Games Business

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## ABSTRACT

This research aims to analyze the influence of telepresence and community factors on brand tribalism and the interest in purchasing virtual items in the online games, especially MMORPG Final Fantasy XIV in Indonesia. The empirical research was a quantitative method and data were collected from 110 respondents through online surveys in the game's Facebook and discord groups, who is the players of online game, MMORPG Final Fantasy XIV in Indonesia. The research model was tested using statistical software, SPSS. Results indicate that telepresence and community factors significantly impact brand tribalism and interest in purchasing virtual items. However, no significant relationship was found between brand tribalism and interest in virtual item purchase. This research fills the gap in previous research, regarding customer behavior in online games and the variables studied such as brand tribalism, telepresence and community factors. Similar research is rarely discussed in previous research.

## SARI PATI

*Penelitian ini bertujuan untuk menganalisis pengaruh faktor telepresence dan komunitas terhadap tribalisme merek dan minat pembelian item virtual pada game online khususnya MMORPG Final Fantasy XIV di Indonesia. Penelitian empiris yang dilakukan adalah metode kuantitatif dan data dikumpulkan dari 110 responden melalui survei online di grup game Facebook dan discord, yang merupakan pemain game online MMORPG Final Fantasy XIV di Indonesia. Model penelitian diuji menggunakan software statistik SPSS. Hasil penelitian menunjukkan bahwa faktor telepresence dan komunitas secara signifikan mempengaruhi tribalisme merek dan minat membeli barang virtual. Namun, tidak ditemukan hubungan signifikan antara tribalisme merek dan minat pembelian barang virtual. Penelitian ini mengisi gap dari penelitian sebelumnya, mengenai perilaku pelanggan dalam game online dan variabel yang diteliti seperti brand tribalism, telepresence dan faktor komunitas. Penelitian serupa jarang dibahas pada penelitian sebelumnya.*

## INTRODUCTION

Based on Square Enix's financial report, the online game *Final Fantasy XIV* managed to make a profit of 14.1 billion yen in 2023. This nominal value has increased compared to 2021, 10.1 billion yen. This fact makes *FFXIV* (*Final Fantasy XIV*) the first *MMORPG* game online from the Square Enix company which has greater profit than traditional games. On the other hand, overall online game profits decreased from 74.3 billion yen in 2021 to 53.5 billion yen in 2023. *MMORPG* (Massively Multiplayer Online Role-Playing Game) is a form of game that can be played online on a server simultaneously. It's different from conventional games, in an *MMORPG* player can form and combine an avatar to represent the player in the game world.

*MMORPG* (massively multiplayer online role-playing game) is a game that can be played online on a server. *MMORPG* players can create and combine an avatar to represent the player in the game world. Then the avatar can be used to collaborate and play roles with other players (Blasi et al., 2019).

*MMORPGs* offer players an experience that resembles real life through realistic avatars and world settings that are easy for players to recognize. This situation became known as telepresence, where a player seems to be «there» in the virtual world, making it seem like a «second world». Telepresence can occur due to factors that change the player's perception of realism and coherence in an environment which causes cognitive changes or binds the player emotionally (Cowan and Ketron, 2019). In line with telepresence, *FFXIV* offers a much broader social interaction aspect compared to other games by allowing players to communicate with other players during the game (Wang et al., 2018). The existence of collaborative and cooperative content in *FFXIV* then gives rise to a community that acts as a forum for players with the same interests to gather with each other. A community where players with the same thoughts and the same playing goals then makes a *FFXIV* player part of a group with certain goals and mindsets (Shukla and Drennan, 2018).

Brand is the identification of a good or service owned by a seller to differentiate the product from the goods or services of other sellers. Brand Tribalism itself is a group of consumers who collectively identify themselves with the product and have similar views and ideas about the brand (Bumrerb, 2021). Consumers included in a brand tribe act as advocates and spread information related to the related brand (Jeong et al., 2020).

Similar to other businesses, *MMORPGs* like *FFXIV* also want to increase sales and reap profits from customers. Purchase intention is the behavior of consumers who want to buy a product. Purchase interest is influenced by various internal and external factors. However, different from conventional products, products purchased in an *MMORPG* are virtual and do not have a physical form (Syahrizal et al., 2020).

By considering the objects purchased in an *MMORPG* game such as *FFXIV*, players' purchasing interest can be influenced by several things that have been explained previously. In the case of *FFXIV*, factors such as how immersive *FFXIV* is and its telepresence aspects may have an influence on players' purchase intentions. *FFXIV's* existence as a game with a diverse and strong community may also be a factor influencing purchasing interest. The existence of the community cannot be separated from the immersive aspect of *FFXIV* itself. The existence of the brand tribalism phenomenon may also have an influence on players' buying interest. The brand of tribalism itself may have been formed due to the nature of *FFXIV* as a game based on community and social interaction.

Therefore, the main research objective is to explore the factors that could help game online industry to enhance their customer purchase intention of virtual item.

## Literature Review

Telepresence is a concept to describe how "immersed" a person is in cyberspace such as the

internet or games (Saleem, Ishaq, Raza and Junaid, 2024). Telepresence can be formed through synergy between an immersive environment. In particular, telepresence has a relatively higher influence on perceived enjoyment than other factors (Han et al., 2020). Players feel as if they are the avatar being played, players feel like they have plunged into a different world and players forget about their surroundings, which is an indicator of telepresence (Zahid, Kamran, Szostak, Awan, 2024).

Community factors are a group of interactions that occur between an individual and a particular community, both interactions between individuals and other individuals in a group, or individuals and groups collectively (Rohimah, Mahfud, Arifudin and Sarkawi, 2024). The influence of the environment in the form of community is known to have an influence on consumer behavior from various sides (Shukla and Drennan, 2018, p. 600). According to Napoli, Dolce and Arcidiacono (2019), community factors are the process of working collaboratively with and through people related geographically, special interests, or similar situations to address problems that affect their well-being. Here they explain that involvement in the community is an important activity for individuals, because it can help fulfill one's life goals, then promote social well-being, self-esteem, empathy, and social competence. By being involved in a community, they can strengthen social bonds, intergroup relations, friendship, and kinship ties in promoting collective action.

According to Ali and Akbar (2020), Kalra, Jhamb and Mittal (2024) brand tribalism is a phenomenon where a group of consumers is formed who have a strong emotional attachment to a product. When someone feels a brand suits their personality, feels the brand is better than other brands, volunteers to take part in activities related to the brand, and is proud to be part of the brand is a measurement of brand tribalism (Jeong, Hwang and Hyun, 2020).

Purchase interest is defined as the possibility that a consumer desires to purchase a good or

service in the future (Bosnjak, Ajzen and Schmidt, 2020), (Sohn and Kim, 2020), (Setyadi, Helmi and Santoso, 2024). According to Ghazali et al (2022), measuring someone's buying interest can be based on awareness, attitudes and buying intentions towards a product.

Cowan, Ketron (2019); Ghazali, Abdelfattah, Al Halbusi and Uzir (2022); Yildiz, Reiter, Vrontis and Mouline (2024) studied the influence of telepresence on brand tribalism by also considering the challenge factors and player involvement in *MMORPGs* and brand tribalism to purchase intention. Community factors have a positive influence on interest in purchasing virtual items in *MMORPGs* (Shukla and Drennan, 2018) extensively by considering influences at the group level (community) and at the individual level (personal) (Wang, Chee, Jantan, Xia, Xue, Ye, Zhang, Wong, Gong and Wang, 2024). According to Cooray and Dissayanake (2022); Kalra, Jhamb and Mittal (2024) brand tribalism can influence the purchasing decisions of its tribe followers, such as the interest in buying virtual items in *MMORPGs*. Bumrerb (2021) see the brand tribe as a marketing tool from the believers. Research conducted by Ghazali, Abdelfattah, AL Halbusi and Uzir (2022); Parahiyanti and Dimara (2024) shows that telepresence can increase consumer purchasing intentions and can strengthen relationships between players.

Based on the explanation of the phenomenon, research objectives and previous research, the figure 1 is the research framework.

## **METHODS**

This research is quantitative research. Data collection was carried out by distributing questionnaires online to participants in the *FFXIV* Indonesia community. All statements are accompanied by choices on a scale of 1 strongly disagree to 6 strongly agree, 6 on a Likert scale. According to data on Facebook and Discord, there were 7048 participants. Meanwhile, the minimum sample required is 100 using the Taro Yamane formula calculation. The data was

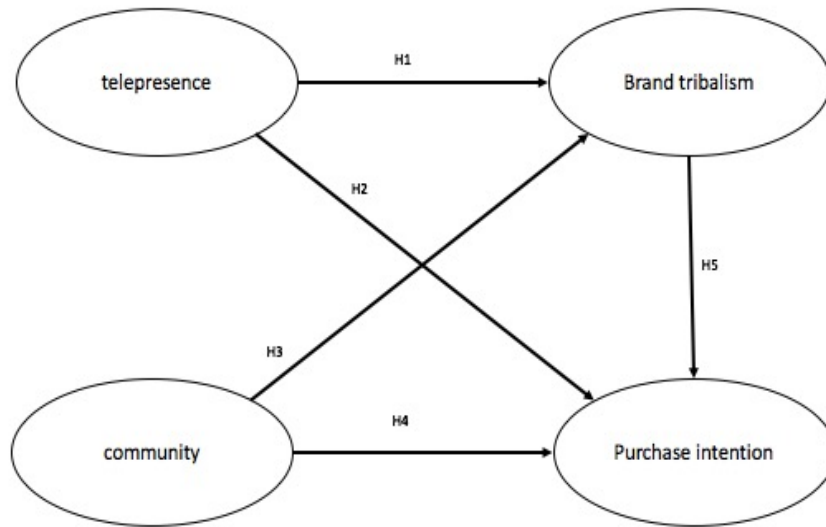


Figure 1. Research framework

- H1 : telepresence has a positive and significant impact on brand tribalism
- H2 : telepresence has a positive and significant impact on purchase intention
- H3 : community has a positive and significant impact on brand tribalism
- H4 : community has a positive and significant impact on purchase intention
- H5 : brand tribalism has a positive and significant impact on purchase intention

then analyzed with the help of SPSS software. The tests carried out were validity, reliability, normality, multicollinearity, heteroscedasticity, simple regression, multiple and multivariate regression to answer the problem formulation in this research.

**RESULTS AND DISCUSSION**

Data collected from 110 Indonesian *FFXIV* community participants on Facebook and Discord using non-probability purposive sampling. All respondents have *FFXIV* accounts; gender was dominated by men at 72.7 percent (80 people), 16.4 percent (18 people) women and 10.9 percent (12 people) did not want to answer; and age is dominated by 25-34 years old at 71.8 percent (79 people), 18-24 years old at 21.8 percent (24 people), 35- 44 years old at 6.4 percent (7 people).

Each variable has 3 indicators except the brand tribalism variable. Questionnaire statements are

built based on the indicators of each of these variables.

First, a validity and reliability test are carried out to measure accuracy and consistency. The result shows that all valid since  $r\text{-count} > r\text{-table}$  and reliable since  $\text{cronbach's alpha} > 0.6$ .

Second, based on the results of the normality test, it can be seen that the residual value of the two dependent and independent variables is 0.054 for telepresence and 0.200 for purchase intention, which is greater than 0.05, so it can be concluded that the residual value is normally distributed.

Third, based on the results of the heteroscedasticity test above, it can be seen that the sig values of the two dependent and independent variables are 0.420 and 0.938 for telepresence, then 0.781 and 0.999 for purchase intention greater than 0.05. It can be concluded that heteroscedasticity does not occur.

Fourth, based on the results of the multicollinearity test on the telepresence variable and community factors on brand tribalism and interest in buying virtual items, it can be seen that the tolerance results from both tests produce a value of 0.76 for the brand tribalism variable and interest in buying virtual items which is greater than 0.10, and is supported by the results of the VIF value with a value of 1.316 from both independent variable tests which is smaller than 10. Therefore, it is concluded that there is no multicollinearity.

Next, a multiple linear regression test is carried out to predict the value of the dependent variable using two or more independent variables as the basis or factors that influence it. There are 2 independent variable which is telepresence and community; 2 dependent variable which is brand tribalism and purchase intention. The author uses the coefficient of determination method to determine the percentage relationship between dependent and independent variables, a significance test (f and t test) to determine the existence of a significant influence between variables, and a regression equation to show whether there is an increase, decrease, or equal to 0 in the dependent variable. Based on the results of the coefficient of determination test on the telepresence variable and community factors on the brand tribalism phenomenon, it was found that 37.7 percent of the variation in the dependent variable could be explained by the independent variables used. The remaining 62.3 percent was influenced by other factors not included in the analysis model, then for the variable interest in buying virtual items it was found that 24.4 percent, the remaining 75.6 percent would be influenced by other factors not included in the analysis model.

The t test was carried out to test the comparison of the averages of two samples to determine the truth of the hypothesis. Based on the results of the t test on the relationship between telepresence and community factors on the phenomenon of brand tribalism and interest in purchasing virtual items, it

can be assessed as follows: (1) In brand tribalism, the telepresence variable and community factor have t values of 2.311 and 5.592 > the t table of 1.98. So, it can be concluded that there is a significant influence between telepresence variables and community factors on brand tribalism in the *FFXIV* game, (2) regarding interest in buying virtual items, the telepresence variable and community factor have a t count of 3.449 and 2.462 > the t table 1.98. So, it can be concluded that there is a significant influence between telepresence variables and community factors on interest in purchasing virtual items in the *FFXIV* game.

The F test is used to evaluate the extent to which the regression model that has been built as a whole is suitable or accurate in predicting actual values based on sample data. Based on the results of the f test, the F value for the two independent variables telepresence and community factors for the dependent variables brand tribalism and interest in buying virtual items is 32,424 and 17,289, which is greater than the F table value, 3.08. It can be concluded that there is a significant influence between telepresence variables and community factors on brand tribalism and interest in purchasing virtual items in *MMORPG FFXIV* in Indonesia.

Based on the test results with SPSS, two regression equations were obtained, namely (1)  $Y = 3.541 + 0.270TEL + 0.777COM$ , which means that telepresence has a positive coefficient value of 0.270 and 0.777 for the Community factor. If the value of telepresence and the Community factor increases, it is estimated that the value of brand tribalism will also increase in this regression model. This positive relationship shows that telepresence and community factors have an influence that supports the increase in the phenomenon of brand tribalism in *MMORPG FFXIV* in Indonesia. (2)  $Y = 3.273 + 0.359TEL + 0.305COM$ , which means that telepresence has a positive coefficient value of 0.359 and 0.305 for the community factor. If the value of telepresence and community factors increases, it is estimated that the value of interest

in purchasing virtual items will also increase in this regression model. This positive relationship shows that telepresence and community factors have an influence that supports increasing interest in purchasing virtual items in *MMORPG FFXIV* in Indonesia.

Based on the results of the multivariate regression test, the relationship between brand tribalism and interest in buying virtual items produces a sig value of 0.530 which is greater than 0.05. Therefore,

the regression coefficient for brand tribalism and interest in buying virtual items is not significant. Then, with a positive coefficient value of 0.055, an increase in the brand tribalism value will tend to cause an increase in the value of the dependent variable (Y), namely interest in buying virtual items, assuming the other independent variables remain constant.

Based on the results of the sobel test, it can be seen from the p-value of the telepresence variable,

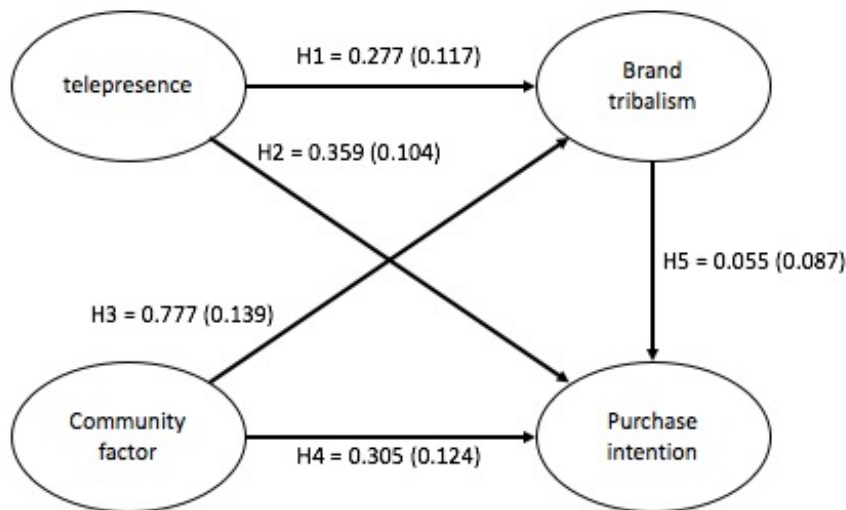


Figure 2 Structural Equation Model

Input:		Test statistic:	Std. Error:	p-value:
a	0.359	Sobel test: 0.62184159	0.03175246	0.53404604
b	0.055	Aroian test: 0.59803549	0.03301644	0.54981625
s <sub>a</sub>	0.104	Goodman test: 0.64873753	0.03043604	0.51650804
s <sub>b</sub>	0.087	Reset all	Calculate	

Figure 3. Sobel Test of telepresence, brand tribalism, purchase intention

Input:		Test statistic:	Std. Error:	p-value:
a	0.777	Sobel test: 0.62817943	0.06802993	0.5298864
b	0.055	Aroian test: 0.61848381	0.06909639	0.53625647
s <sub>a</sub>	0.139	Goodman test: 0.63834581	0.06694647	0.5232486
s <sub>b</sub>	0.087	Reset all	Calculate	

Figure 4. Sobel test of community factor, brand tribalism, purchase intention



the community factor on brand tribalism and its influence on interest in buying virtual items is greater than 0.05. So, it is concluded that the telepresence variable, community factors and brand tribalism do not have a significant effect on interest in buying virtual items.

Based on the tests carried out, 4 hypotheses were accepted and 1 was rejected. The 4 hypotheses accepted are the first hypothesis: telepresence has a significant effect on brand tribalism. Second hypothesis: there is a significant influence between telepresence on purchase intention. Third hypothesis: community factors have a significant effect on brand tribalism. Fourth hypothesis: there is a significant influence between community factors on interest in buying virtual items. All of these results are supported by research conducted by Ghazali (2022); Shukla and Drennan (2018); Yildiz, Reiter, Vrontis and Mouline (2024); Parahiyanti and Dimara (2024); Kalra, Jhamb and Mittal (2024); Wang, et all (2024). Meanwhile, the hypothesis that was rejected was that there was no significant influence between brand tribalism on interest in purchasing virtual items. These results contradict research conducted by Cooley and Dissayanake (2022)

#### MANAGERIAL IMPLICATION

In this research, it was found that the relationship between community factors and telepresence with brand tribalism shows that the value of community factors is higher than telepresence in influencing brand tribalism. Community and telepresence factors are directly proportional to brand tribalism, so that these calculations can be applied to developers of interactive media such as websites, applications or games. Community factors have a significant role in increasing brand tribalism, so in developing interactive media, developers can properly consider the value community factors together with telepresence in order to create interactive media that has emotional ties, namely brand tribalism.

The telepresence variables and community factors

in this study show that the presence of telepresence and community factors play an important role in interest in purchasing virtual items. These two variables have quite similar portions of each other in influencing interest in buying virtual items. Telepresence factors and community factors are directly proportional, so if a developer wants to develop interactive media such as a website, application or video game and wants to achieve sales, the developer can consider strengthening the telepresence factor and building a strong community factor.

#### CONCLUSIONS

This research aims to explore the factors that could help game online industry to enhance their customer purchase intention of virtual item. The results of data testing for 110 respondents who have accounts and are players of the FFXIV Indonesia online game are as follows: (1) There is a significant influence of telepresence on brand tribalism. This is proven by the linear regression and t test carried out showing that the hypothesis is correct so that an increase in the telepresence element will influence brand tribalism which makes it increase too, and vice versa. (2) Telepresence also significantly influences interest in purchasing virtual items. The hypothesis made by the author has been proven correct based on multiple linear regression calculations and the t test, so that the relationship between these two variables is directly proportional and shows that high consumer telepresence will also make consumers have a high interest in buying virtual items. (3) There are significant results in data calculations which show that community factors influence brand tribalism. It was found from the results of linear regression testing and the t test that the rise and fall of brand tribalism will be influenced by community factors in an inverse manner. (4) Community factors also significantly influence interest in purchasing virtual items. It can be seen from the linear regression test and t test that a significant influence makes community factors influence interest in buying virtual items in a directly proportional manner so that a high level

of community influence factors will make interest in buying virtual items high as well. (5) There is no significant relationship between brand tribalism and interest in purchasing virtual items. This is proven by multivariate regression testing and the t test which shows that high or low brand tribalism will not significantly influence interest in buying virtual items.

The significant influence of telepresence on brand tribalism can be a reference if there are developers who want to develop interactive media such as websites, applications or video games. By increasing the telepresence factor in interactive media, it can directly increase the brand tribalism factor.

The influence of telepresence also appears to significantly influence interest in purchasing virtual items, so this can be used to focus on presenting telepresence factors in interactive media. If this telepresence factor can be fulfilled, it can directly increase interest in purchasing virtual items for these products to develop virtual products in interactive media and generate revenue.

Interactive media developers can focus on developing community factors because these community factors are directly proportional and have a significant influence on brand tribalism. If the community factor is built strongly, it will create a strong brand of tribalism too.

Interest in purchasing virtual items is significantly influenced by community factors. If you want to increase interest in purchasing virtual items in interactive media such as websites, applications and video games, developers in the future can focus on developing a strong community factor.

Brand tribalism does not have a significant influence on interest in purchasing virtual items, but even though it is not significant, the brand tribalism factor still has an influence, even though it is small. So, developers can still strengthen the brand tribalism factor even though it does not have a significant effect on interest in buying virtual items, because brand tribalism still has a significant influence on other variables such as community factors and telepresence.

Of course, this research still has the opportunity to be explored more deeply and widely. The suggestion for further research is that researchers can use other online games, use contexts outside of video games or other interactive media to find out whether this research can influence other products or not. Other limitations that could become potential for further research is involve others relevant variable likes brand loyalty variables and find out their relationship with brand tribalism, expand the number of respondents by increasing the number of samples or population or taking samples from other regions to get richer results, measure the degree of influence of each factor. ■



## REFERENCES

- Ali, M., & Akbar, S. (2020, March 30). Brand Tribe Paradoxes: An Overview with Empirical Evidence from Pakistan. *Asian Social Science*, 16(4). <https://doi.org/10.5539/ass.v16n4p49>
- Blasi, M. D., Giardina, A., & Giordano, C. (2019, March). Problematic video game use as an emotional coping strategy: Evidence from a sample of MMORPG gamers. *Journal of Behavioral Addiction*, 8(1), 25-34. [10.1556/2006.8.2019.02](https://doi.org/10.1556/2006.8.2019.02)
- Bosnjak, M., Ajzen, I., & Schmidt, P. (2020). The Theory of Planned Behavior: Selected Recent Advances and Applications. *Eur J Psychol*, 16(3), 352-356. <https://doi.org/10.5964/ejop.v16i3.3107>
- Bumrerb, P. (2021). BRAND TRIBALISM: A MARKETING TOOL FROM THE BELIEVERS. *Journal of Management Information and Decision Sciences*, 24(1), 2.
- Cooray, A.A., & Dissayanake, D.M.R. (2022, April). SOCIAL MEDIA AND ONLINE BRAND TRIBALISM BEHAVIOR ON CONSUMER BRANDS. *International Journal of Research in Education Humanities and Commerce*, 3(2), 302-309. [https://ijrehc.com/doc/ijrehc03\\_22.pdf](https://ijrehc.com/doc/ijrehc03_22.pdf)
- Cowan, K., & Ketron, S. (2019). A dual model of product involvement for effective virtual reality: The roles of imagination, co-creation, telepresence, and interactivity. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.10.063>
- Ghazali, E., Abdelfattah, F., Al Halbusi, H., & Uzir, U. H. (2022, January). A study of player behavior and motivation to purchase Dota 2 virtual in game items Foon-Lip Tan. *Kybernetes*. <https://doi.org/10.1108/K-08-2021-0678>
- Ghozali, I. (2019). *Aplikasi analisis multivariate dengan program SPSS*. Badan Penerbit Universitas Diponegoro.
- Han, S.-L., An, M., & Han, J. J. (2020). Telepresence, time distortion, and consumer traits of virtual reality shopping. *Journal of Business Research*, 118, 311-320.
- Jeong, J. Y., Hwang, J., & Hyun, S. S. (2020, July). Customers' relationships leading to brand tribalism and tribe behavioral intentions. *International Journal of Hospitality Management*, 88, 133-791. <https://doi.org/10.1016/j.ijhm.2020.102529>
- Kalra, G., Jhamb, D., & Mittal, A. (2024). Emotional Brand Attachment, Brand Tribalism, and Co-creation in Luxury Hotels: Insights from Emerging Economies. *The Open Psychology Journal*, 17(1).
- Napoli, I. D., Dolce, P., & Arcidiacono, C. (2019, April 11). Community Trust: A Social Indicator Related to Community Engagement. *Social Indicators Research*. <https://doi.org/10.1007/s11205-019-02114-y>
- Parahiyanti, C. R., & Dimara, N. I. (2024). Impulsive Buying in TikTok Live Streaming: Enhancing The Role of Telepresence, Brand Trust, and Flow State. *Innovation, Technology, and Entrepreneurship Journal*, 1(1), 42-54.
- Rohimah, R. B., Mahfud, M., Arifudin, O., & Sarkawi, S. (2024). MADRASAH'S CONTRIBUTION TO THE EMPOWERMENT OF THE VILLAGE COMMUNITY IN INDONESIA. *International Journal of Teaching and Learning*, 2(4), 1088-1101.
- Saleem, T., Ishaq, M. I., Raza, A., & Junaid, M. (2024). Exploring the effect of telepresence and escapism on consumer post-purchase intention in an immersive virtual reality environment. *Journal of Retailing and Consumer Services*, 81, 104014.
- Setyadi, B., Helmi, S., & Santoso, A. (2024). Unraveling the influence of product advertising on consumer buying interest: exploring product knowledge, product quality, and mediation effects. *Cogent Business & Management*, 11(1), 2349253.
- Shukla, P., & Drennan, J. (2018, July). Interactive effects of individual and group level variables on virtual purchase behavior in online communities. *Information & Management*, 55(5), 598-607. <https://doi.org/10.1016/j.im.2018.01.001>
- Sohn, J. W., & Kim, J. K. (2020, November). Factors that influence purchase intentions in social commerce. *Technology in Society*, 63. <https://doi.org/10.1016/j.techsoc.2020.101365>
- Syahrizal, A., Purwandari, B., Mishbah, M., & Dzulfikar, M. F. (2020). Buying the Unreal: Drivers of Virtual Item Purchase in Video Games. In *Proceedings of the 3rd International Conference on Software Engineering and Information Management* (pp. 203-209). Association for Computing Machinery. <https://doi.org/10.1145/3378936.3378948>
- Wang, K., Lu, H.-T., & Chang, K.-C. (2018). Determinants of We-intention for continuance in MMORPG: Social interaction and norm factors. In *Proceedings of the 5th Multidisciplinary International Social Networks Conference* (pp. 1-6). ACM. <https://doi.org/10.1145/3227696.3227714>
- Wang, Z. X., Chee, W. M., Jantan, A. H. B., Xia, Y. H., Xue, H., Ye, M. J., ... & Wang, L. (2024). Impact of perceived value in virtual brand communities on purchase intention of domestic electric vehicles. *Acta Psychologica*, 248, 104371.
- Yamane, T. (2014, November 7). Statistics: An Introductory Analysis. *Canadian Journal of Economics and Political Science/Revue canadienne de economiques et science politique*, 31(1), 163. <https://doi.org/10.2307/139661>
- Yildiz, H., Reiter, A., Vrontis, D., & Moulina, J. P. (2024). Interacting in virtual reality: When the Proteus effect stimulates 3D MMORPG players to buy. *Technological Forecasting and Social Change*, 201, 123205.
- Zahid, M. N., Kamran, M., Szostak, M., & Awan, T. M. (2024). Telepresence, social presence and involvement in consumer's intention to buy apparels through an interplay of consumer brand engagement. *foresight*.