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Research Article

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DETERMINANTS AFFECT USER SATISFACTION AND CONTINUANCE USAGE OF OTT APPLICATION: A CASE STUDY OF ZALO

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ABSTRACT

In the context of growing prevalence of over-the-top (OTT) applications in Vietnam, local providers continue to struggle to establish a presence in the market due to the failures to comprehend the requirements and expectations of users, putting them at a disadvantage when competing with global giants such as Facebook, Instagram, and TikTok. Therefore, this study has been conducted to identify the key factors that contribute to user satisfaction and lead to continued usage of Vietnam's second most popular OTT application - Zalo. The research develops a comprehensive framework to investigate the determinant factors of 4 independent variables including Perceived ease of use, Critical mass, Playfulness, and Capability and 3 dependent variables including Perceived usefulness, User satisfaction, and Continuance Usage. This research study were collected survey from 331 resondents. From the findings, this study concludes with recommendations for local OTT service providers in general, and Zalo in particular, to help them develop and enhance the user experience to meet users' expectations and become more competitive in the Vietnam OTT industry.

Keywords: OTT application, Zalo, User satisfaction, Continuance usage.

INTRODUCTION

Background

The incredibly rapid growth of the Internet and the advent of advanced technology have ushered in sweeping shifts in society, politics, technology, and consumer behavior (Seo *et al.,* 2008). As a result, users have been encouraged to broadly adopt and utilize social technologies in their everyday lives which has led to the formation of an important part of their lives. To be more specific, the research indicated that 65% of users aged 18–34 regularly utilize OTT (Over-the-top) services, whereas just 27% of users aged 45+ and older users do so for a number of reasons ranging from convenience to security on a daily basis (Tyler Ball, 2020).

According to The European Electronic Communications Regulatory Authority (BEREC, 2016), OTT application is defined as Internet-accessible content, applications, or services that is geared for individual consumers. The entertainment and communication sectors are the primary targets of OTT applications. In terms of services, examples are Amazon.com's and Google.com's online stores and search engines, respectively. For the applications, Facebook and Zalo may be used as social media. According to Anderson, K. E. (2016), most mobile messaging (MM) or mobile instant messaging (MIM) is well-known as OTT applications. OTT messaging is a service supplied by a third party that operates independently of a user's cellular network but also complements the features typically offered by such a network. Users will have a more favorable outlook on social media if they believe it is beneficial as a means of disseminating knowledge online (Dhoha *et al.,* 2019). To demonstrate, the Edison report showed that 160 million American people used Facebook in 2022, which significantly rose to 63% in 2022. (The Infinite Dial, 2022).

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Moreover, according to The Infinite Dial 2022 (Edison Research, 2022), 88% of U.S population aged 12 and older, have smartphone, 53% have tablet, 82% use social media (95% uses Facebook, 91% uses Instagram, 88% uses Tiktok) which shows how technology impact us. Thus, it is essential to analyze the key factors influencing the user's technology adoption when engaging with a particular Over-the-top application.

Research Problem

In the context of Vietnam, according to the Digital Report 2022: Vietnam (Wearesocial, 2022), the population get a record of 98.56 million people, with 158.3% of people having cellular mobile devices, indicating that one citizen may have more than one phone, 73.2% of people using the internet, and 78.1% of people using social media.

In 2023, the Vietnamese-created social media app Zalo is rapidly rising in popularity (Decision Lab, 2023). Zalo became the second most popular OTT app in Vietnam, with 91.3% of the population using it, behind only Facebook with 93.8% (Digital Vietnam: 2022, 2022).

However, the issue is that the digital world is becoming too crowded, which is frustrating for people (Heinemann, 2015). In addition, as digital platforms grow in popularity, their owners will see the market as very competitive, which will make client acquisition harder. To set themselves apart from the competition and attract more users, companies should think about and prioritize a product portfolio that provides additional value for users (Grett and Jakobs, 2021). The OTT industry is still dominated by Facebook. Zalo, on the other hand, is rapidly expanding as a formidable rival (Daisy Nguyen, 2019).

Few researchers have highlighted the relevance of user satisfaction in evaluating a Zalo company's performance, despite several studies highlighting its significance (Hunt, 1977; Eggert and U.W, 2002; Lin, J.S.C., and Wu, C.Y., 2011). Hence, this research needs to investigate the main determinants that affect the user satisfaction and

continuance usage in contrast to the fast-paced evolution of competing technology.

Objectives of this study

This research aims to identify the key factors which affect user satisfaction and continuance usage of OTT applications in Vietnam. Specifically, this study findings help to understand how consumer satisfaction and continuance usage is influenced by these factors. Furthermore, this research can recommend some suggestions for OTT service providers companies and marketing executors on ways to optimize OTT applications to attract more potential users.

LITTERATURE REVIEW

Perceived ease of use (PEOU)

The level of usage and interaction between users and the system can enhance ease of use (Zuniarti, *et al.,* 2021). Moreover, it is anticipated that perceived ease of use would favorably affect people's perceptions of the technology's use (Davis *et al.,* 1989). Potential users may also strongly believe that a system or technology is too complicated to use even if they consider it to be advantageous (Davis *et al.,* 1989). Hence, it is argued that PEOU affects PU. In the research of E-learning with the TAM Model, they discovered that attitudes toward usage were highly impacted by PEOU (Abramson, Dawson, & Stevens, 2015).

Perceived playfulness (PP)

The construct Perceived Playfulness indicates the degree to which a person believes that he or she is paying close attention to, and is interested about, their contact with the web, and that this engagement is inherently enjoyable or intriguing to them (Moon, J. & Kim, 2001). In addition, the hedonic value of a technology is another term for its perceived playfulness (Van Der Heijden, 2004). When taken to an extreme, hedonic information technologies are employed for no other purpose than to provide entertainment (Davis, F. D., Bagozzi, R. P., and Warshaw, P. R, 1992). The majority of the previous research on the role of playfulness in TAM has been conducted with work-related technologies, and it has been discovered that a person's level of pleasure or playfulness with a given technology has a direct or mediated impact on their desire to use that technology (Moon, J. and Kim, Y, 2001; Davis, F. D., Bagozzi, R. P., and Warshaw, P. R., 1992; Van der Heijden, H., 2004). Moreover, Wakefield and Whitten (2006) found that users who perceived their mobile app interactions as more entertaining tended to use the devices more frequently than those who did not view their interactions as playful.

Critical mass (CM)

Critical mass refers to the point at which the adoption of a new communication technology experiences a significant increase due to the minimum number of users who have accepted the innovation. (Rogger, 1995). In other words, critical mass is considered the critical mass of social media users is defined as the amount of individuals who have access to an individual's social media network (Ilie, V., Van Slyke, C., Green, G., and Lou, H., 2005). According to a 2015 research study by Hammedi and Bouqiaux, the CM has a favorable and considerable impact on perceived usefulness (Hammedi and Bouqiaux, 2015). Perceived usefulness is positively affected by the perceived critical mass (Xiaoliang Aaron Shen, Matthew K.O Lee, Christy M.K Cheung, & Huaping Chen, 2009).

Capability (CP)

According to a prior study conducted by Fethi and Ferah Calisir in 2004, the system capacity (CP) impacts perceived utility, whereas user assistance influences both perceived usefulness and learn ability. The increasing popularity of social media sites may also be related to the accessibility and efficacy of hardware and softwares that let users interact with others and exchange information (Rauniar, R., Rawski, G., Yang, J., & Johnson, B., 2014). From that, they stated social media capabilities refers to the features, apps, and social media tools that a website offers in order to satisfy a user's desire to participate in social media tasks (Rauniar, R., Rawski, G., Yang, J., and Johnson, B., 2014).

The relationship between Perceived usefulness and User satisfaction

In TAM research, Perceived Usefulness (PU) refers to the individual's impression of how much the employment of a particular technology enhances performance (David, 1989). In addition, Amin & *et al.,* (2014) believed that user satisfaction was significantly affected by the PU of a mobile website. It also was proved by Park et al. (2013) that the PU has a positive influence on user satisfaction (US). The previous studies on the link between PU and US have shown that consumers' beliefs about a technology's ability to improve or enhance the quality of their work performance also play a significant influence in determining how satisfied they ultimately are with that technology (Nicholas Wilsona, Keni Kenib, Pauline Henriette, Pattyranie Tan, 2021).

Hence, it should be highlighted that a consumer's perception of the usability of a certain tool or application feature supplied or offered by a company might eventually influence their level of fulfillment (Nicholas Wilsona, Keni Kenib, Pauline Henriette, Pattyranie Tanc, 2021). This will eventually influence their desire to continue utilizing this application (Bhattacherjee, 2001). In this research, Perceived Usefulness is used to measure customer satisfaction and to predict continued use of over-the-top applications.

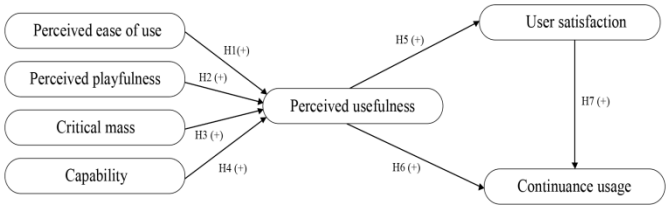
The relationship between Perceived usefulness and Continuance Usage

Continuance Usage (CU) refers to users' engagement to continuing usage of the instant product or service (Hong, Lee, & Suh, 2013). In the Expectation Confirmation Theory, the researchers stated that both PU and US play a significant role in users' desire to continue using a certain system (Bhattacherjee, 2001). When users perceive that the advantages of utilizing an application are beneficial to them, they will feel delighted and engaged while using the program, and their motivations to continue using will rise (Joo, Lim, & Kim, 2016; Yao & Cao, 2017). On the other hand, if the application is perceived as not useful by the consumer, they will stop using it and look for alternative, and more user-friendly applications to use, which would lead to lower engagement of the applications (Nor Hayati Kassima, Norlina Mohamed Noorb, Jati Kasumac, and Juliza Saleh, 2019). The level of US is the most important factor in determining whether or not people would embrace and continue using a social networking site (Shi et al., 2010). Based on the results obtained through the research of Nicholas Wilsona, Keni Kenib, Pauline Henriette, and Pattyranie Tan (2021), they proved that users were more satisfied when they evaluated the product to be both valuable and accessible to use.

The connection between user satisfaction toward continuance usage

Quality service delivery is essential to a business's long-term viability since satisfied users have a greater opportunity to continue usage of the product in the future (S. Gi Park, K. Kim, and M. O'Neill, 2014). According to research by H. S. Yu *et al.,* (2014), the research concluded that high levels of service quality significantly influenced both customer satisfaction and repurchase intentions. Another research revealed that service quality should meet or surpass consumer expectations to ensure recurring engagement from satisfied users (Anderson & Sullivan, 1993). Based on the research in 2016, it provides statistical interpretation of greater than 70% of US, CU, and user referral intention (Hanh N. Tang, and Young-Chan Lee, 2016). Hence, increased continuance usage is mediated by satisfied users.

Proposed Research Model



H1: Perceived ease of use positively and directly affects on perceived usefulness

H2: Perceived playfulness positively and directly affects on perceived usefulness

H3: Critical mass positively and directly affects on perceived usefulness

H4: Capability positively and directly affects on perceived usefulness

H5: Perceived usefulness positively and directly affects on user satisfaction

H6: Perceived usefulness positively and directly affects on continuance usage

H7: User satisfaction positively and directly affects on continuance usage

METHODOLOGY

Research Design

This research adopted quantitative method which will examine the connection between the offered constructs from the orginal study model and determine whether or not it is accepted amonng study's hypotheses (Creswell, 2003). Furthermore, due to the background and objectives of the study, a quantitative approach was used to determine the most important factors influencing satisfaction and intention to use an over-the-top (OTT) app. Based on the research model, hypotheses were formulated and questionaires were designed. Sufficient data was collected and analyzed by SPSS and SmartPLS softwares. Finally, the research study was documented and concluded with the provement of statistical findings, identified limitation, practical implications and conclusion.

Sampling method and Measurement Scale

Due to flexible time constraints, a tight budget, and straightforward data collecting, the non-probability sampling, particularly convenience sampling approach was chosen for this study to achieve the research goals. According to Alison Galloway, in "convenience sampling", researchers select participants based on how accessible they are. It might be advantageous for gathering different perspectives and generating testing hypotheses for further in-depth studies (Alison Galloway, 2005).

These questions use 5-point Likert scales (Burns, R. B. & Burns, 2008) with 1 indicatae "Strongly disagree" and 5 indicate " Strongly agree" to ensure clarity and consistency. Each part of the questionnaires contain trap-questions which designed to assess respondent experiences to ensure for accurate responses. The questionnaires were created on Google Forms and sent them using online platforms via Facebook, Zalo, and Instagram. From collected data, there was 331 valid respondents and this number reached the expectation of researcher's target numbers. Therefore, it meets the requirement of statistical analysis in order guarantee for data reliability.

The survey emphasize on all Zalo users with a variety of ages in Vietnam. The researcher will target students, college students, specialists, and businessmen, among others. According to Zalo Credential (2022), the great majority of Zalo users are young individuals who are internet-savvy, open-minded, and rapid to adopt new trends. These demographics are frequently conversant with new technologies and media, allowing them easy access to confident new automobiles (Albarran *et al.,* 2007). Data was collected after four weeks which was long enough ensure for sufficient results in order to provide a comprehensive data for analyzing how OTT app affect user satisfactiona and their continuance usage.

A survey was divided into 3 main parts: Demographic section including their gender, age, place of location, and reason for using the Zalo application; and the filter question to test whether a respondent will be qualify for this survey or not; and data collection questions focused on 32 items of the 7 variables.

DATA ANALYSIS

Demographic information

The research survey was collected from 331 participants which counted as valid responses. Besides, the information of demographic provides valuable insights in term of participant's background . The information at below table indicates the frequency analyis of several factors include: gender, age, location, purpose and experiences of users when use Zalo app

Information	Demographic	Frequency	Percent
Gender	Male	136	41.1
	Female	195	58.9
Age	Under 18 year old	14	4.2
	18 - 34 year old	255	77.0
	35 - 50 year old	27	11.2
	50 - 65 year old	18	5.4
	Above 65 year old	7	2.1
Location	Bien Hoa	16	4.8
	Can Tho	10	3.0
	Da Nang	9	2.7
	Ha Noi	47	14.2
	Hai Phong	5	1.5
	Ho Chi Minh city	244	73.7
Purpose	Personal	31	9.4
	Daily update	4	1.2
	Daily update, Work	2	.6
	Work	100	30.2
	Personal, Work	101	30.5
	Personal, Work, Daily update	23	6.9
	Work, Daily update	5	1.5
	Work, Entertainment	8	2.4
	Work, Entertainment, Personal	12	3.6
	Work, Entertainment, Personal, Daily update	29	8.8
	Work, Entertainment, Daily update	1	.3
	Work, Contact	2	.6
	Entertainment	5	1.5
	Entertainment, Personal	4	1.2
	Entertainment, Personal, Daily update	1	.3
	Entertainment, Daily update	2	.6
	Contact	1	.3
Experience	Below 6 months	28	8.5
	6 - 12 months	62	18.7
	Above 12 months	241	72.8

Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
PEOU1	331	1	5	4.04	1.008
PEOU2	331	1	5	4.36	.779
PEOU3	331	1	5	4.32	.771
PEOU4	331	1	5	4.34	.794
PEOU5	331	1	5	4.29	.787
Valid N (listwise)	331				

The “Mean” values for five items ranged from 4.04 to 4.36, indicating that respondents strongly concurred with the statement. With a “Mean” value of 4.35, (PEOU2) had the greatest level of agreement. This indicates that Zalo users consider Zalo to be an easy-to-use application that can be utilized for a variety of purposes. In addition, the “Standard Deviation” values for all variables range from 0.794 to 1.008, which are minor values indicating that survey’s participant responses to the survey questions were comparable.

	N	Minimum	Maximum	Mean	Std. Deviation
PP1	331	1	5	3.24	1.223
PP2	331	1	5	3.44	1.100
PP3	331	1	5	3.27	1.167
PP4	331	1	5	3.43	1.060
Valid N (listwise)	331				

The “Mean” value of PP is between 3.24 and 3.44, which shows that respondents have neutral opinions for those items. The highest mean score wasPP2 which indicates that Zalo users tend to experience predominantly positive and joyful emotions while utilizing the application. Likewise, the standard deviation of all the variables between 1.060 and 1.223, indicating there is a lack of significant variation among the respondents who participated in the survey.

	N	Minimum	Maximum	Mean	Std. Deviation
CM1	331	1	5	3.69	1.308
CM2	331	1	5	3.67	1.313
CM3	331	1	5	3.48	1.329
CM4	331	1	5	3.63	1.271
CM5	331	1	5	3.80	1.309
Valid N (listwise)	331				

Five items of Critical mass have the “Mean” values from 3.48 to 3.80, which indicate that the respondents had a pretty high agreement with the statement. The variable CM5 remains the highest mean value of agreement, at 3.80, which indicates that a significant number of Zalo users utilize the platform for professional purposes, particularly for networking and establishing crucial connections. Furthermore, the “Standard Deviation” values of the five items were discovered between 1.271 and 1.329 which demonstrates the minimal variation in the opinions of the respondents regarding the aforementioned questions

	N	Minimum	Maximum	Mean	Std. Deviation
CP1	331	1	5	3.16	.992
CP2	331	1	5	3.35	1.159
CP3	331	1	5	3.31	1.080
CP4	331	1	5	3.09	1.035
Valid N (listwise)	331				

Four variables have the “Mean” values between 3.09 and 3.35. The mean values do not differ significantly of these four items, indicating that the respondents have neutral opinion about those statements. To be more specific, the highest mean score 3.35 is CP2 . The standard deviation values of the five variables ranged from 0.992 to 1.159, demonstrates a limitation of diversity in the participants' viewpoints in relation to the questions.

	N	Minimum	Maximum	Mean	Std. Deviation
PU1	331	1	5	3.88	1.117
PU2	331	1	5	3.64	1.199
PU3	331	1	5	3.79	1.129
PU4	331	1	5	3.54	1.206
PU5	331	1	5	3.77	1.206
Valid N (listwise)	331				

The mean of Perceived usefulness items vary at slight degree, with the mean range from 3.54 to 3.88. The variable PU1 has the highest mean (3.88). Moreover, the “Standard Deviation” of PU was found from 1.117 to 1.206. The findings indicate a same range of perspectives among the respondents with regard to the posed inquiries

	N	Minimum	Maximum	Mean	Std. Deviation
US1	331	1	5	3.94	.858
US2	331	1	5	3.88	.910
US3	331	1	5	3.84	.870
US4	331	1	5	3.95	.729
Valid N (listwise)	331				

Most respondents have a positive attitude by the mean value between 3.84 and 3.95in utilizing the Zalo application. Item US4 has a strong agreement, with the highest mean value of 3.95 . Besides, the standard deviation of the US was found to be less than 1, ranging from 0.729 to 0.910. This suggests that the survey respondents had a relatively uniform perspective towards the questions above.

	N	Minimum	Maximum	Mean	Std. Deviation
CU1	331	1	5	3.94	1.456
CU2	331	1	5	3.81	1.437
CU3	331	1	5	3.50	1.470
CU4	331	1	5	3.46	1.544
CU5	331	1	5	3.56	1.491
Valid N (listwise)	331				

The “Mean” scores varied from 3.46 to 3.95. The survey question had the highest levels of agreement that is CU1 with scored value of 3.94.The “Standard Deviation” values of five items ranged from 1.437 to 1.544, showing these values were deemed small indicating a lack of significant variance in the opinions of the survey participants

Cronbach’s Alpha

Perceived ease of use

Cronbach's Alpha	N of Items
.868	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PEOU1	17.31	8.095	.392	.929
PEOU2	16.99	7.427	.784	.819
PEOU3	17.03	7.354	.816	.812
PEOU4	17.01	7.260	.811	.812
PEOU5	17.06	7.418	.775	.821

All variables of PEOU factor have a Cronbach's Alpha value at 0.868 (> 0.6) which is acceptable. Besides, the “Cronbach’s Alpha if Item Deleted” of PEOU1 are respectively 0.929 (> 0.868), but the “Corrected Item-Total Correlation” of this item is higher than 0.3. Therefore none of these items are removed.

Playfulness

Cronbach's Alpha	N of Items
.887	4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PP1	10.14	9.160	.654	.895
PP2	9.93	8.974	.806	.835
PP3	10.10	8.911	.751	.855
PP4	9.95	9.149	.815	.833

With the high level Cronbach's Alpha of PP items that is 0.887 (approximate 0.9). This result shows that it is highly trustworthy and well consistent. Moreover, The “Cronbach’s Alpha if Item Deleted” value of item PP1 is higher than 0.887, however the “Corrected Item-Total Correlation” of this item is above 0.3, PP construct still remains this item.

Critical Mass

Cronbach's Alpha	N of Items
.888	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CM1	14.58	19.535	.713	.868
CM2	14.60	19.101	.755	.858
CM3	14.79	20.093	.640	.884
CM4	14.65	19.684	.726	.865
CM5	14.48	18.571	.815	.844

CM has a noticeably high Cronbach's Alpha value (0.888), which is a good consistency and reliable. Besides, all “Corrected Item-Total Correlations” of CM are higher than 0.3 so none of these constructs are eliminated.

Capability

Cronbach's Alpha	N of Items
.796	4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CP1	9.75	6.996	.636	.733
CP2	9.56	6.629	.560	.772
CP3	9.60	6.508	.661	.717
CP4	9.82	7.060	.579	.758

There are four variables in CP, which have the Cronbach's Alpha value is acceptable (0.796), showing that the data is usable and good consistent. Moreover, the “Corrected Item-Total Correlation” values are also acceptable since they are higher than 0.3.

Perceived usefulness

Cronbach's Alpha	N of Items
.889	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PU1	14.75	15.814	.760	.859
PU2	14.98	15.897	.678	.878
PU3	14.83	15.874	.741	.863
PU4	15.08	15.621	.706	.871
PU5	14.85	15.098	.774	.855

PU has an extremely good Cronbach's Alpha value (0.889), which is a high level of consistency and trustworthiness. Furthermore, “Cronbach’s Alpha if Item Deleted” values are lower than the CA value, and “Corrected Item-Total Correlation” values are significantly higher than 0.3 as well. Thus, none of these variables will be removed.

User satisfaction

Cronbach's Alpha	N of Items
.853	4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
US1	11.67	4.705	.667	.826
US2	11.73	4.365	.718	.805
US3	11.77	4.765	.632	.841
US4	11.66	4.861	.788	.784

The dependent variable US has a very good internal consistency since the Cronbach's Alpha value being higher than 0.8 (0.853). In addition, these items that exhibit "Corrected Item-Total Correlation" values exceeding 0.3 are deemed acceptable.

Continuance usage

Cronbach's Alpha	N of Items
.891	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CU1	14.33	25.779	.690	.877
CU2	14.47	25.868	.696	.875
CU3	14.77	25.282	.722	.870
CU4	14.81	24.292	.751	.863
CU5	14.71	24.054	.809	.849

All variables of CU construct have a high Cronbach's Alpha value at 0.891, which is more reliable and consistent. Furthermore, as all values of the "Corrected Item - Total Correction" metric for the CU items are greater than 0.3, it is recommended that no items be rejected.

Reliability Statistic Summary: it was determined that there exists a total of 32 items, comprising 18 independent variables and 14 dependent variables. Notably, none of the items were deemed unfit for inclusion in the study.

Exploratory Factor Analysis (EEA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.831
Bartlett's Test of Sphericity	Approx. Chi-Square	6939.150
	df	496
	Sig.	.000

The above result has great significance for the EFA testing, given that the Kaiser-Meyer-Olkin (KMO) measure of Sampling Adequacy attains a high value of 0.831 (close to 1), which exceeds the required condition of 0.6. In addition, "Sig. value" of the Bartlett's Test of Sphericity has been observed to be zero, thereby fulfilling the requisite criterion of being less than 0.05 (sig.<0.05). Thus, the results of the factor analysis are deemed valuable based on the adequately specified criteria. The findings also indicate that the measured variables in the survey questionnaire demonstrate a significant correlation within the research model's latent variable

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.918	21.618	21.618	6.918	21.618	21.618
2	4.623	14.447	36.065	4.623	14.447	36.065
3	3.364	10.512	46.577	3.364	10.512	46.577
4	3.064	9.574	56.151	3.064	9.574	56.151
5	2.040	6.374	62.524	2.040	6.374	62.524
6	1.694	5.293	67.817	1.694	5.293	67.817
7	1.140	3.564	71.381	1.140	3.564	71.381
8	.888	2.776	74.157			
9	.782	2.443	76.600			
10	.650	2.030	78.631			
11	.578	1.805	80.436			
12	.564	1.762	82.198			
13	.486	1.520	83.718			
14	.476	1.488	85.206			
15	.460	1.436	86.642			
16	.401	1.254	87.897			
17	.392	1.225	89.122			
18	.375	1.173	90.294			
19	.335	1.047	91.342			
20	.321	1.005	92.346			
21	.307	.960	93.306			
22	.279	.871	94.178			
23	.271	.846	95.024			
24	.254	.794	95.817			
25	.233	.727	96.544			
26	.217	.679	97.223			
27	.188	.587	97.809			
28	.176	.549	98.359			
29	.167	.522	98.881			
30	.135	.422	99.302			
31	.131	.410	99.713			
32	.092	.287	100.000			

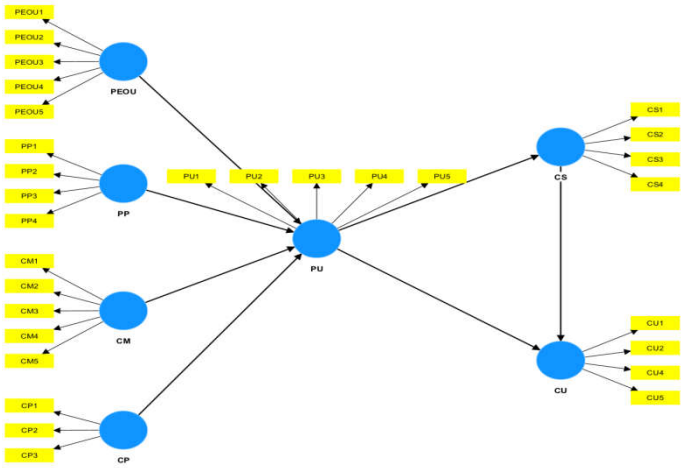
The "Total Variance Extracted" value is 71.381% (>50%)fulfills the necessary criterion of exceeding 50%. This outcome indicates that the variables in the research model have been reduced to 71.381%. Conversely, the unexamined variables comprising 28,619% of the total observations are deemed as missing in this investigation. Moreover, it is valuable that the initial 7 components exhibit Eigen values that are higher than the value of 1, thereby signifying their significance as factors. Hence, the research model proposed include seven constructs which is PEOU, PP, CM, CP, PU, US, and CU has been verified to be entirely appropriate.

PLS model

Variable	CM	CP	CS	CU	PEOU	PP	PU
CM1	0.871						
CM2	0.786						
CM3	0.730						
CM4	0.724						
CM5	0.868						

CP1		0.813					
CP2		0.777					
CP3		0.753					
CP4		0.693					
US1			0.830				
US2			0.901				
US3			0.861				
US4			0.895				
CU1				0.802			
CU2				0.759			
CU3				0.659			
CU4				0.750			
CU5				0.775			
PEOU1					0.758		
PEOU2					0.712		
PEOU3					0.738		
PEOU4					0.726		
PEOU5					0.754		
PP1						0.868	
PP2						0.881	
PP3						0.823	
PP4						0.799	
PU1							0.848
PU2							0.828
PU3							0.866
PU4							0.758
PU5							0.843

The results in the above table indicate that a majority of the variables examined in this research exhibit a "Outer Loading" value exceeding 0.7. This finding suggests that the latent variables incorporated in the research model possess the capacity to account for approximately 50% of the variation observed in the survey questionnaire's variables. In contrast, the variables CP4 and CU3 have “Outer Loading” values below an acceptable value of 0.7, specifically 0.693 and 0.659, respectively. Furthermore, these two variables are unimportant and contribute excessively to the topic, so the model analysis was conducted anew. In conclusion, 30 variables in the adjusted research model and measurement items of variables as below:



Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
CM -> PU	0.085	0.206	0.108	1.710	0.088
CP -> PU	0.373	0.363	0.113	3.309	0.001
US -> CU	0.426	0.435	0.110	3.858	0.000
PEOU -> PU	0.011	0.103	0.088	1.254	0.210
PP -> PU	0.320	0.318	0.079	4.061	0.000
PU -> US	0.796	0.795	0.048	16,459	0.000
PU -> CU	0.449	0.439	0.112	4.006	0.000

The correlation between Critical mass (CM) and Perceived usefulness (PU) has a P value greater than 0.05 (0.088 > 0.05) and a coefficient of 0.185, which is invalidated data. It showed CM has no significant influence on PU. Besides, the “P Value” of Perceived ease of use (PEOU) on Perceived usefulness (PU) is also found greater than the required condition (0.210 > 0.05), which demonstrates the PEOU has no significant impact on Perceived usefulness (PU). Hence, the hypothesis “H1 and H3will be rejected from this research.

Meanwhile, all remaining hypotheses have been accepted as their corresponding "P Values" are less than or equal to 0.05, satisfying the necessary criteria. The moderating variable of Perceived usefulness (PU) is significantly impacted by Playfulness (PP), and Capability (CP). In other words, hypotheses H2, H4, H5, H6, H7 were validated and approved by the data in this research.

CONCLUSION

The aim of this research is to identify the key factors that influence the user satisfaction and their intention of continuing to use OTT app, modified with case study of Zalo. This research study was designed to measure the degree of satisfaction of Zalo users since its conceptual framework is built based on comparable models based on previous theoretical investigations.

The research findings and statistic interpretations in the discussion demonstrate that the research questions were answered and the purposes of researcher were achieved via the collected information which generally accepted influencing determinants such as: playfulness and capability, the final factor is the most significant for the perceived usefulness of Zalo among its customers.

In contrast, the study proved that Perceived usefulness is not affected by Critical mass and Ease of use. In addition, the author demonstrated that Perceived usefulness has a substantial impact on the satisfaction of Zalo users, and that both of the aforementioned factors influence users' intent to continue using Zalo.

On the basis of the above findings, Vietnamese business OTTs and marketers need to develop the app functions and marketing strategies which help to achieve user satisfaction that may automatically lead to a higher annual number of active users of OTT apps in Vietnam.

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