

UDC 332

## EVALUATING SUSTAINABLE USER INTENTIONS FOR THE DIRECTORATE GENERAL OF TAXES WEBSITE: AN INSIGHTFUL ANALYSIS THROUGH THE LENS OF THE POST-ACCEPTANCE MODEL OF INFORMATION SYSTEM CONTINUANCE

Ari Dessanti Putri Sekti  
University of Brawijaya, Indonesia  
E-mail: [dessanti@ub.ac.id](mailto:dessanti@ub.ac.id)

### ABSTRACT

The Directorate General of Taxes (Direktorat Jenderal Pajak - DJP), a key division of the Indonesian Ministry of Finance, established an innovative website to further e-government strategies. However, server issues have led to some dissatisfaction among users, potentially threatening sustained use, a key indicator of information technology success. To explore this, we conducted a study using the Post-Acceptance Model of Information Systems Continuance Approach. This research encompassed variables such as perceived usefulness, confirmation, quality of website information and system, user satisfaction, and user continuance intention. Our findings revealed that user satisfaction, which is influenced by perceived usefulness, confirmation, and website information and system quality - significantly affects user continuance intention. Remarkably, user satisfaction also serves as a mediating variable, emphasizing its importance in ensuring the DJP website's sustained use.

### KEY WORDS

User satisfaction, sustainable use intention, post-acceptance model, information system.

In the current era of globalization, where our world is increasingly interconnected and interdependent, the advancement of information technology has become instrumental in achieving superior governance. This aspiration can be realized through the effective deployment of e-government, a system that enhances public services, fosters seamless interactions with citizens, and promotes accountability and transparency among service providers.

The mandate to implement e-government in Indonesia is enshrined in Presidential Instruction Number 3 of 2003. This directive emphasizes the use of e-government to bolster good governance, enhance transparency and accountability, and hasten the democratic process. Consequently, all public institutions, including the Directorate General of Taxes (DJP) – a division under the Indonesian Ministry of Finance charged with the formulation and execution of tax policies – embarked on the journey of e-government development.

The DJP, committed to this progressive mandate, introduced a website, a potent tool in the e-government arsenal. Defined by the Indonesian Dictionary (KBBI) as a server-run computer program providing access to several pages, a website serves as an ideal conduit for executing e-government objectives, particularly because it offers easy access to information for users. DJP's official website, [pajak.go.id](http://pajak.go.id), epitomizes the utilization of e-government in the tax sector. It offers a myriad of tax-related information, including the latest legislative updates, a suite of tax applications (e-filing, e-billing, e-invoicing, e-registration), updates on Value Added Tax (VAT) refunds, press statements, activities and announcements of DJP, customer service details, and the DJP's organizational structure. Moreover, the recent additions of tax literacy education and tax-related journals underscore the website's commitment to broadening public awareness on taxation matters. This demonstrates the successful integration of e-government in the taxation sector and streamlines the public's access to pertinent tax-related information and activities.

The DJP website, while a valuable resource for numerous public services, is not without its challenges. Some taxpayers have voiced complaints concerning recurring server issues, especially during the critical Tax Return (SPT) reporting period, as outlined by Fitriya (2022). As the DJP website serves as a significant portal for official tax information, its

unreliability could potentially drive the public to seek tax information from alternative websites. The concern herein lies with the risk of less literate users accessing incorrect or misleading information. As a result, such technical difficulties can critically impact user satisfaction.

User satisfaction is a subjective measure, gauging the individual's sentiment based on the disparity between their initial expectations of a product and the actual outcomes delivered (Kotler, 2002). Should a product's performance align with the consumer's expectations, it leads to high satisfaction levels. However, should the product fail to meet expectations, satisfaction wanes. Exceptional performance that surpasses expectations is likely to elicit profound satisfaction, or in other words, high satisfaction. In the realm of information technology, user satisfaction significantly influences intentions toward sustainable usage. The long-term viability and success of any information technology relies fundamentally on its sustained usage. Consequently, the main focus of this research lies in uncovering the factors influencing sustainable usage intentions on the DJP website.

To discern sustainable use intentions, this research try to leverages the Post - Acceptance Model of Information System, an approach pioneered by Bhattacharjee in 2001. This model posits that user satisfaction is influenced by perceived usefulness and confirmation. Perceived usefulness is the personal expectation of the advantages derived from utilizing information technology. (Bhattacharjee, 2001). On the other hand, confirmation refers to the congruity between the individual's expected usage of information technology and its actual execution (Bhattacharjee, 2001). Moreover, the Post-Acceptance Model asserts that both user satisfaction and perceived usefulness steer sustainable use intentions.

User satisfaction, an influential factor driving an individual's determination to persistently use a system, can be envisioned as an affective response. This response can range from positive (satisfaction), neutral (indifference), to negative (dissatisfaction) sentiments (Bhattacharjee, 2001). Positive emotional responses towards an employed information technology system increase the individual's comfort level, enhancing the likelihood of its future use. An augmentation in overall satisfaction predisposes individuals to reuse the system.

Conversely, Kang and Lee (2009) suggesting that user satisfaction is influenced significantly by both the quality of information provided on a website and the overall system quality of the website. Website information quality reflects the overall integrity of the information dispensed by the website system. In contrast, website system quality corresponds to the user's perception of the website system's performance. These two variables have been validated to significantly impact user satisfaction on the website, as demonstrated in studies by Kang & Lee (2009) and McKinney et al. (2002). Consequently, the researcher intends to incorporate these two variables to refine the research model. Based on the background, this research seeks to uncover the influence of perceived usefulness (PUS), confirmation (CFM), website information quality (WIQ), and website system quality on user satisfaction (WSS). Simultaneously, the research also conducts to ascertain the impact of user satisfaction on user continuance intention.

## LITERATURE REVIEW

A website, often referred to as a web page, embodies a multifaceted construct that can be conceptualized through numerous definitions. Bektı (2015) offers a comprehensive perspective, describing a website as a congregation of individual pages that function collectively to exhibit a diverse array of information. This content can take many forms: text that communicates explicit messages, still or moving visuals that offer dynamic representations, animations that bring static imagery to life, sound that engages the auditory senses, or an integration of these components. The data presented on these pages can persist in two states: static, remaining unchanged over time, or dynamic, changing in response to user interaction or other factors. Each page within a website is intricately interconnected, forming a complex structure where each element links to an extensive network of other pages, allowing for seamless navigation and exploration by the user.

Expanding on this, Rahmadi (2013) offers another nuanced interpretation. A website, he posits, which is colloquially more widely recognized as a web page, is fundamentally a collection of web pages that share a common theme or purpose, binding them together. These pages aren't standalone entities; rather, they are interconnected, often further enriched by the inclusion of auxiliary files. These could encompass image files that provide visual illustrations, video files that deliver multimedia content, or other types of files, all contributing to the overall user experience. This symbiotic relationship between the various elements of a website highlights the inherent complexity and multi-dimensionality of what we commonly understand as a website or a web page.

The inception of the P-AMIS can be traced back to 2001, where it was introduced by Bhattacharjee. This innovative theory finds its roots in the Expectation Confirmation Theory (ECT) originally posited by Oliver in 1980, forming a comprehensive synthesis that offers in-depth insights into consumer behavior and decision-making processes. As per the insights offered by Bhattacharjee (2001), the conscious decision to persistently use an information system bears considerable similarity to the decision of a consumer to repeatedly purchase a product. The reasoning behind this assertion lies in three fundamental parallels: firstly, both decisions are underpinned by an initial commitment - acceptance of a system or a purchase. Secondly, these decisions are strongly influenced by preceding user experiences, whether they stem from interaction with an information system or a product. Thirdly, both types of decisions have the potential to catalyze a change in subsequent decision-making, manifesting in the reversal of a prior commitment.

The P-AMIS approach further elaborates that the user's resolution to perpetuate usage of an information system is determined by user satisfaction and perceived usefulness. User satisfaction is directly proportional to how effectively their anticipations, based on previous engagements with the system, have been fulfilled. Consequently, this satisfaction plays a decisive role in the continued utilization of the system. In this context, perceived usefulness becomes a vital determinant, as it pertains to the user's evaluation of the benefits they garner from the system. This perception consequently shapes user satisfaction and their propensity to continue engaging with the system. In the end, it is the degree of user confirmation - the degree of alignment between anticipated and actual system performance post-acceptance - that impacts perceived usefulness. As Bhattacharjee (2001) indicates, this interplay of user confirmation, perceived usefulness, and user satisfaction provides a holistic understanding of the users' interaction with information systems, influencing their decision to continue usage.

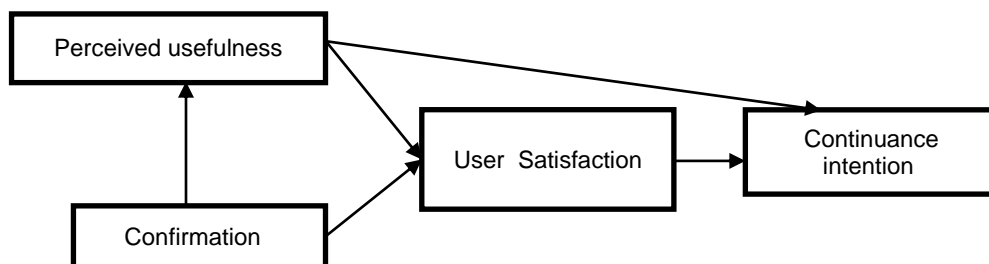


Figure 1 – P-AMIS (Bhattacharjee, 2001)

Within the framework of the Expectation-Confirmation Model (ECM), Continuance. Use Intention is conceived as a consumer's intent to perpetuate the use of a specific product or service. This model posits that consumers first construct anticipations about a product or service prior to its utilization. Subsequently, they acquire and engage with the product or service, and it is only post an introductory period of consumption that they can formulate perceptions regarding its performance (Han & Conti, 2020). Continuance use intention serves as an effective predictor of the actual employment of a technology or application (Amoroso & Lim, 2017). Thus, within the context of the ECM theory, the continuance use intention of e-wallets can be classified as a constituent of the continuance use intention

construct. The queries employed to gauge user satisfaction are informed by the research conducted by Bhattacharjee (2001).

The definition of perceived usefulness in this research is the user's perception of the expected benefits from the *DJP* website. If the perceived usefulness of using information technology for transactions increases, the user's feelings towards information technology also become more positive, meaning that the user is more satisfied with using it. Research carried out by Bhatarjee in 2001, the team of Yuan and colleagues in 2014, along with the work by Susanto and his team in 2016 have adapted the questionnaire items used to measure perceived usefulness from Bhattacharjee's (2001) study.

The definition of confirmation in this research is the subjective assessment of users resulting from comparing their expectations and perceptions of the *DJP* website. Confirmation can be defined as comparing expectations with reality when using information systems. The research conducted by Bhattacharjee (2001) shows that confirmation affects user satisfaction. The survey questions utilized to assess confirmation are derived from Bhattacharjee's (2001) study and modified accordingly.

In this study, the concept of website information quality is construed as the cumulative excellence of data emanating from the *DJP*'s website system. Empirical evidence from Kang & Lee's (2009) exploration, as well as Hsieh et al.'s (2010) scrutiny, demonstrates a positive correlation between the quality of information and the satisfaction derived from the website. Furthermore, specific variables contributing to information quality, as identified by Hsieh et al. (2010), exhibit a constructive influence on user satisfaction within a blogging context. The constituent elements of the questionnaire utilized to quantify information quality find their foundation in DeLone & McLean's (2003) analytical framework.

Website system quality, in this research, is defined as the customer's perception of the performance of the *DJP* website system. A study conducted by Kang & Lee (2010) has shown that the quality of a website system has a positive effect on user satisfaction, and McKinney *et al.*'s (2002) study has shown that the performance and expectations of a website system quality affect user satisfaction. The question items used to measure system quality are based on DeLone & McLean's (2003) framework.

User satisfaction refers to the user's feelings about their previous use of information technology. According to Bhatarjee (2001) and Kang & Lee (2010), user satisfaction influences a user's continuance intention. The question items used to measure user satisfaction are based on Bhatarjee's (2001) framework.

## METHODS OF RESEARCH

The population used in this research consists of users of the website *pajak.go.id* in Java Island. The reason for selecting this research location is because Java Island has the largest population in Indonesia, and tax revenue is also dominated by Java Island. Furthermore, the realization of tax revenue in Java Island has experienced a significant increase in some provinces in 2021. In this research, the population was not precisely known, so accidental sampling was used. The hypotheses in this study were evaluated using the Partial Least Square (PLS) statistical approach, facilitated by the use of the SmartPLS software.

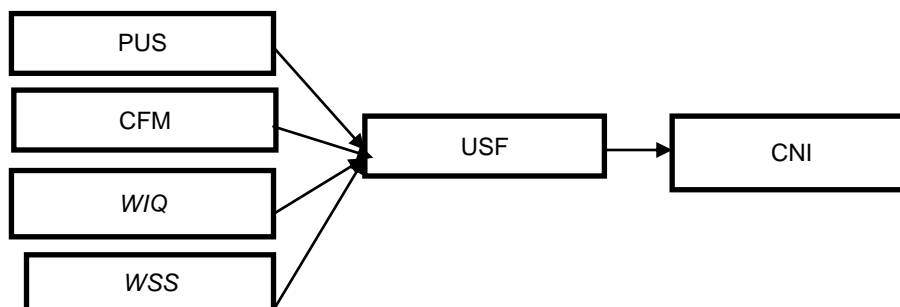


Figure 2 – Research Model

## RESULTS OF STUDY

The research questionnaire was distributed to respondents who are users of the website *pajak.go.id*. The number of respondents obtained from the sampling process was 235. From the questionnaire distribution results, information on respondent characteristics was obtained, including gender, age, and frequency of visits/use of the website *pajak.go.id* per year. The characteristics of the respondents are presented as follows:

Table 1 – Respondent Characteristics

Age Group	Frequency	Percentage
< 20 year	112	47.7%
21-30 year	117	49.8%
31- 40 year	4	1.7%
41-50 year	2	0.9%
Total	235	100%
Gender	Frequency	Percentage
Male	71	30.2%
Female	164	69.8%
Total	235	100%
Website Visits Per Year	Frequency	Percentage
< 5 times	95	40.4%
6-10 times	61	26.0%
11-15 times	27	11.5%
16-20 times	5	2.1%
>20 times	47	20.0%
Total	235	100%

The Partial Least Square (PLS) analysis was performed by conducting tests on the Measurement Model and Structural Model. The Measurement Model was tested by conducting an assessment of both the outer and inner models. After passing the tests for the outer and inner models, the next step was to conduct tests on the Structural Model. The following are the results of the Structural Model testing.

In this study, the evaluation of the Structural Model was executed to inspect the interconnections among the constructs, to assess the significance values, and to ascertain the congruity of the research model. The deployment of the Goodness of Fit Model provided the necessary means to quantify the influence of exogenous variables on their endogenous counterparts. The application of the Goodness of Fit Model within the PLS analysis framework was facilitated through the determination coefficient (R-Square) and predictive relevance measure (Q-Square). The results of the Goodness of Fit Model are summarized in the table below:






Table 2 – Results of Goodness of Fit Model

Variable	R <sup>2</sup>
User Satisfaction	0.651
User Continuance Intention	0.389
$Q^2 = 1 - (1 - R_1^2)(1 - R_2^2) = 0.786$	

Based on the table 2, it can be observed that the R-square for User Satisfaction was 0.651, and that of User Continuance Intention was 0.389. The Q-Square predictive relevance (Q<sup>2</sup>) calculation resulted in 0.786. This indicates that the contribution of all independent variables, namely Perceived Usefulness, Confirmation, Website Information Quality, and Website System Quality towards User Continuance Intention was 78.6% in total. The remaining 22.4% was the contribution of other factors that were not discussed in this research.

For the purpose of hypothesis testing, we utilized the Bootstrapping function embedded within the SmartPLS 3.0 software. In an encouraging light, Hair and his team (2014) clarified that a hypothesis is confidently validated if the significance level dips below 0.05 or if the t-value vaults over a defined critical boundary. It's quite promising that the critical value for the t-statistics was set at a manageable 1.96 at a 5% significance level.

Table 3 – Hypothesis Testing

		Original Sample	Sample Mean	Standard Deviation	T-Statistics ( O/STDEV )	P-Values	Results
Hypothesis (H1).	PUS -> USF	0.224	0.221	0.071	3.157	0.002	
Hypothesis (H2).	CFM -> USF	0.334	0.333	0.061	5.435	0.000	
Hypothesis (H3).	WIQ -> USF	0.188	0.181	0.063	3.004	0.003	
Hypothesis (H4).	WSS -> USF	0.198	0.209	0.074	2.698	0.007	
Hypothesis (H5)	USF -> CI	0.624	0.622	0.055	11.358	0.000	

The information comes from research findings processed using the Smart PLS 3.0 tool in 2022.

The path coefficients above are a crucial reference for making decisions about our hypotheses. They reveal original sample values, p-values, and t-statistics, which determine if we accept or reject each hypothesis. We consider a hypothesis to be valid if the t-statistics value is larger than the t-table value, or if the p-value is less than 0.05.

- The first hypothesis, H1, proposed that Perceived Usefulness (PUS) impacts User Satisfaction (USF). From the data in Table 3, we can see that PUS does indeed have a strong positive impact on USF. This is shown by a t-statistics value of 3.157 (>1.96), and a p-value of 0.002(< 0.05). The original sample value of 0.224 confirms that PUS and USF share a positive relationship. Therefore, we accept H1;
- The second hypothesis, H2, suggested that Confirmation (CFM) affects USF. Once again referring to Table 3, we notice that CFM does positively impact USF, as shown by a t-statistics value of 5.435 (> 1.96) and a p-value of 0.000 (< 0.05). The original sample value of 0.334 indicates a positive relationship between CFM and USF. Thus, we accept H2;
- The third hypothesis, H3, indicated that Website Information Quality (WIQ) influences USF. As shown in Table 3, WIQ has a significant positive impact on USF, which is demonstrated by a t-statistics value of 3.004 (>1.96) and a p-value of 0.003 (<0.05). The original sample value of 0.188 suggests a positive relationship between WIQ and USF. Therefore, we accept H3;
- The fourth hypothesis, H4, suggests that the quality of a website system, or Website System Quality (WSS), has an effect on User Satisfaction (USF). Looking at Table 3, it's clear that WSS positively impacts USF. This is proven by a t-statistics value of 2.698, (>1.96) and a p-value of 0.007 (<0.05). With an original sample value of 0.198 showing a positive link between WSS and USF, we can confidently say that H4 is accepted;
- Lastly, the fifth hypothesis, H5, proposed that User Satisfaction (USF) has an impact on Continuance Intention (CI). From the data presented in Table 3, it's clear that USF significantly positively influences CI. This conclusion is derived from a t-statistics value of 11.358 (> 1.96) and a p-value of 0.000 (<0.05). The original sample value of 0.624 suggests that USF and CI share a positive relationship, leading us to accept H5.

Table 4 – Indirect Effect

	Original Sample	Sample Mean	Standard Deviation,.	T-Statistics. ( O/STDEV )	P-Values.	Results.
PUS -> CI	0.140	0.137	0.044	3.145	0.002	Significant
CFM -> CI	0.208	0.208	0.044	4.705	0.000	Significant
WIQ -> CI	0.117	0.113	0.041	2.854	0.004	Significant
WSS -> CI	0.124	0.130	0.048	2.580	0.010	Significant

Source: Research Results.

This study undertook an examination to ascertain if User Satisfaction served as a mediating factor in the influence of PUS, CFM, WIQ, and WSS on the CI. The

interconnection between the independent variables and the dependent variables through this mediating entity can be visualized in the Table 4:

- The influence of Perceived Usefulness (PUS) on Continuance Intention (CI), with User Satisfaction (USF) as a mediating factor, shows significant value. This is backed by a t-statistics value of 3.145, which is more than 1.96, and a p-value of 0.002, which is less than 0.05;
- Similarly, the impact of Confirmation (CFM) on Continuance Intention (CI), using User Satisfaction (USF) as a bridge, also holds significant value. This is demonstrated by a t-statistics value of 4.705, exceeding 1.96, and a p-value of 0.000, falling below 0.05;
- The effect of Website Information Quality (WIQ) on Continuance Intention (CI), through the intermediary of User Satisfaction (USF), shows substantial value as well. This is indicated by a t-statistics value of 2.854, which is more than 1.96, and a p-value of 0.004, which is less than 0.05;
- Finally, the impact of Website System Quality (WSS) on Continuance Intention (CI), with User Satisfaction (USF) serving as a mediator, bears significant value. This is confirmed by a t-statistics value of 2.580, larger than 1.96, and a p-value of 0.010, smaller than 0.05.

## DISCUSSION OF RESULTS

### The Effect of Perceived Usefulness on User Satisfaction

Perceived usefulness refers to the user's perception of the benefits expected from information technology. The results of H1 testing showed that H1 was accepted. This indicates that the higher the user perceives the benefit of the *DJP* website, the more positive the user's feelings towards the *DJP* website, meaning that the user is increasingly satisfied with its use. This research result is consistent with the research conducted by Bhatarjee (2001), Yuan *et al.*, (2014), and Susanto *et al.*, (2011).

Confirmation refers to initial expectations or the reality of experience after using information systems. Confirmation can be interpreted as comparing expectations with reality when using information systems. The second hypothesis (H2) in this research states that confirmation affects user satisfaction. The test results indicate that H2 was accepted. This indicates that the more consistent the user's expectations with the reality of the *DJP* website, the more it increases satisfaction. This research result is consistent with the research conducted by Bhattacharjee (2001), meaning that confirmation affects user satisfaction.

### The Effect of Website Information Quality on User Satisfaction

Website Information Quality refers to the overall quality of information generated by a website system (Kang and Lee, 2010). The third hypothesis (H3) in this research states that website information quality affected user satisfaction. H3 was tested using a two-tailed hypothesis test. The results of the hypothesis test for H3 showed that the t-statistic value was 3.004 (greater than the t-table value of 1.96), therefore H3 was accepted. This indicates that the higher the completeness and quality of the information available on the *DJP* website, the higher the user satisfaction. The findings of this research are consistent with those of Kang & Lee (2009) and Hsieh *et al.*, (2010).

### The Effect of Website System Quality on User Satisfaction

Website system quality refers to customers' perceptions of the performance of the website system itself. The fourth hypothesis (H4) in this research states that website system quality affected user satisfaction. The test results show that H4 was accepted, indicating that the better the website performance, the higher the level of user satisfaction. This research supports the findings of Kang & Lee (2009) and McKinney *et al.* (2002).

### The Effect of User Satisfaction on User Continuance Intention

User satisfaction is the satisfaction of users with their previous use of information technology. User satisfaction will affect their intention to continue using the technology. The

fifth hypothesis (H5) in this research states that website system quality affected user satisfaction. H5 was tested using a two-tailed hypothesis test. The test results for H5 testing showed that the t-statistic value was 2.689 (greater than the critical value of 1.96), indicating that H5 was accepted. This suggests that the higher the level of user satisfaction, the higher their intention to continue using the *DJP* website. This research supports the findings of Bhattacharjee (2001).

## CONCLUSION

The findings of this scholarly inquiry suggest that aspects such as perceived usefulness, confirmation, website information quality, and website system quality wield substantial influence on user satisfaction. Moreover, user satisfaction appears to significantly impact the continuance intention of the user. Importantly, the investigation recognizes user satisfaction as an intermediate and mediating variable. Thus, future academic pursuits are advised to reevaluate user satisfaction in its capacity as an intermediary construct.

## REFERENCES

1. Amoroso, D., & Lim, R. (2017). The Mediating Effects of Habit on Continuance Intention. *Information Management*, 37, 693–702.
2. Becti, H. B. (2015). *Mahir Membuat Website dengan Adobe Dreamweaver CS6, CSS, dan JQuery*. Yogyakarta: ANDI.
3. Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS quarterly*, 351-370.
4. Delone, W., & McLean, E. (2003) Model Of Information Systems Success: A Ten Year Update. *Journal Of Management Information Systems*, 19, 10-15.
5. Fitriya. (2022). SPT Tahunan Online: Solusi Gagal saat Pelaporan SPT Tahunan Pajak. Retrieved from <https://klikpajak.id/blog/gagal-saat-pelaporan-spt-tahunan-online-ini-solusinya/>
6. Han, J., & Conti, D. (2020). The Use of UTAUT and Post Acceptance Models to Investigate the Attitude towards a Telepresence Robot in an Educational Setting. *Robotics*, 9(2), 1–19.
7. Hsieh, C. C., Kuo, P. L., Yang, S. C., & Lin, S. H. (2010). Assessing blog-user satisfaction using the expectation and disconfirmation approach. *Computers in Human Behavior*, 26(6), 1434-1444.
8. Kang, Y. S., & Lee, H. 2009. Understanding the role of an IT artifact in online service continuance: An extended perspective of user satisfaction. *Computers in Human Behavior*, 353–364.
9. Kotler, P. (2002). *Manajemen Pemasaran*, Edisi Millenium. Jakarta: PT Prenhallindo.
10. McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research*, 13(3), 296-315.
11. Online pajak. (2018). Website Pajak dan Aplikasi Resmi Milik Pemerintah yang Harus Anda Ketahui. Retrieved from <https://www.online-pajak.com/tentang-pajakpay/website-pajak-resmi>.
12. Rahmadi, M. L. (2013). *Tips Membuat Website tanpa Coding & Langsung Online*. Yogyakarta: Andi.
13. Susanto, A., Chang, Y., & Ha, Y. (2016). Determinants of Continuance Intention to Use the Smartphone Banking Services. *Industrial Management & Data Systems*, 116(3), 508–525.
14. Veeramootoo, N., Nunkoo, R., & Dwivedi, Y. K. (2018). What determines the success of an e-government service? Validation of an integrative model of e-filing continuance usage. *Government information quarterly*, 35(2), 161-174.
15. Yuan, S., Liu, Y., Yao, R., & Liu, J. (2014). An Investigation of Users Continuance Intention towards Mobile Banking in China. *Information Development*, 32(1).