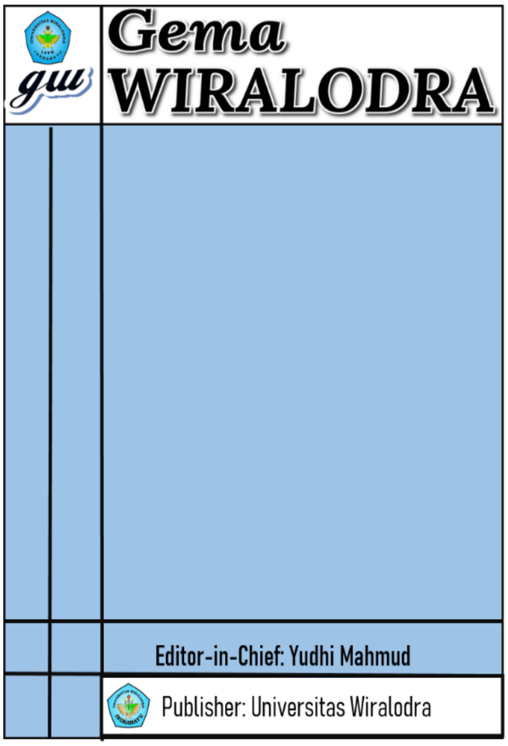


The effectiveness of using RFID and IoT in digital transformation processes in garment companies using the UTAUT model2

Thedjo Sentoso[a*], Kusrini[b], Hanafi[c]
[a*]Universitas Amikom, Yogyakarta, Indonesia, thedjos@gmail.com
[b]Universitas Amikom, Yogyakarta, Indonesia, kusrini@amikom.ac.id
[c]Universitas Amikom, Yogyakarta, Indonesia, hanafi@amikom.ac.id

To cite this article:
Sentoso, T, Kusrini, Hanafi. (2023). The effectiveness of using RFID and IoT in digital transformation processes in garment companies using the UTAUT model2. *Gema Wiralodra*, *14*(2), 697-709.
To link to this article:
https://gemawiralodra.unwir.ac.id/index.php/gemawiralodra/issue/view/22
Published by:
Universitas Wiralodra
Jln. Ir. H. Juanda Km 3 Indramayu, West Java, Indonesia

Gema Wiralodra, 14(2), 697-709 p-ISSN: **1693-7945**
https://gemawiralodra.unwir.ac.id/index.php/gemawiralodra e –ISSN: **2622 - 1969**

Orginal Article

The effectiveness of using RFID and IoT in digital transformation processes in garment companies using the UTAUT model2

Thedjo Sentoso[a*], Kusrini[b], Hanafi[c]
[a*]Universitas Amikom, Yogyakarta, Indonesia, thedjos@gmail.com
[b]Universitas Amikom, Yogyakarta, Indonesia, kusrini@amikom.ac.id
[c]Universitas Amikom, Yogyakarta, Indonesia, hanafi@amikom.ac.id

[*]Corresponding Author: thedjos@gmail.com
Submit 09-06- 2023, accepted 08-07-2023, published 08-07-2023

Abstract
This study aims to analyze the effectiveness of using RFID and IoT in the digital transformation process in a garment company using the UTAUT2 model. This research is necessary because it can influence the intentions and behavior of its users to increase production effectiveness. A quantitative approach uses the survey method used in this study to achieve the research objectives. The number of respondents in this study was 193 employees who worked in the preparation area. The data collected from the questionnaire results were analyzed using inferential statistics. The study results show that employee acceptance of using RFID and IoT in the digital transformation process gets a positive response. Each variable average value used is in the value range 3.79 – 4.44 (scale 1 to 5). In addition, it was found that Performance Expectancy, Effort Expectation, and Price Value positively influenced Behavioral Intention. In contrast, Habit and Behavioral Intention positively influenced Use Behavioral. As for the Social Influence and Hedonic Motivation variables on Behavioral Intentions and the Facilitating Conditions variable on Usage Behavior, no positive effect was found.
Keywords: RFID, IoT, Garments, UTAUT2, Effectiveness

1. Introduction

The garment industry is an industry that produces apparel products which are one of the basic needs of society (Anjani & Hasma, 2022). This industry is also a labor-intensive industry that requires much labor in its production process and is also one of the mainstay sectors in the national economy (Santini & Kajeng, 2018). The garment industry is an industry that requires change and innovation in facing global competition, such as increasingly fierce competition, higher consumer demands, and increasingly developing technology (Prasetyawati et al., 2020). Furthermore, along with technological developments, the garment industry must follow the digitalization trend because the implementation of digital technology in the garment industry still needs to be improved, and many companies still use manual systems in their production processes (Norman & Alamsjah, 2020).

In today's digital era, RFID and IoT technology can be a solution to assist the garment industry in carrying out a digital transformation process. Applying RFID and IoT technologies in garment production can help improve efficiency and product quality and reduce production costs (Norman & Alamsjah, 2020). However, the implementation of RFID and IoT technologies in the garment industry in Indonesia still needs to be improved. This is due to several factors, such as a need for an understanding of this technology, high investment costs, and a lack of human resources who have the skills to operate this technology, as well as concerns regarding privacy and data security. So that this is also a challenge that must be faced in implementing RFID and IoT technology in the process of digital transformation in the garment industry (Ahmad et al., 2020).

One of the critical areas in the garment production process is the preparation area, which is responsible for preparing raw materials, such as cloth and other accessory materials, and cutting them into pieces ready to be sewn into finished products. The processes in the preparation area include the cutting process, namely the process of cutting the fabric according

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

to a predetermined pattern; secondary artwork processes, such as printing and borders and the distribution center process, namely the process of distributing the cutting results to the secondary artwork process on request, then sorting them to then arrange them in descending order, which is ready to be sewn in the following process, namely the sewing process, until it becomes a finished product (Trilaksono et al., 2022). Area preparation requires special equipment and machines, such as fabric cutting machines, fabric sorting machines, and pattern paper setting machines. All appliances and equipment used in area preparation must work properly to prevent delays in the production process. The use of RFID and IoT in is garment industry can help increase the effectiveness and efficiency of the production process (Kudryavtseva et al., 2023).

In preparation areas, RFID can be used to track raw materials and ensure that the raw materials used have been approved by management and passed quality tests. In addition, RFID can also be used to identify raw materials to be used in certain products, thereby enabling companies to optimize the use of natural materials (Unhelkar et al., 2022). Meanwhile, IoT can be used to monitor the condition of the machines in the preparation area. In the garment industry, the devices used in the preparation process must work properly so that there are no delays in the production process. By using IoT sensors on devices, companies can monitor machine conditions in real-time and predict maintenance or repair needs before machines experience unexpected breakdowns or downtime. In addition, IoT can also be used to monitor risk conditions in the work environment and identify the potential that can harm employee health (Tan & Sidhu, 2022). In the garment industry, area preparation is very critical area because the quality of the final product is very dependent on the quality of raw material preparation and arrangement of fabric pieces (Trilaksono et al., 2022). Therefore, this research needs to be carried out to ensure that the implementation of RFID and IoT, especially in the preparation area, runs effectively and can ensure that the production process can run well and meet predetermined quality standards. A study by Nayak et al. (2022) investigated the benefits of sustainable RFID technology in the fashion supply chain in Vietnam. The research shows that the use of RFID technology in fashion supply chains in Vietnam can provide significant benefits in sustainability and efficiency; some of the benefits gifts this study include reducing waste, saving energy, reducing carbon emissions, and improving product quality. In addition, RFID technology can also help companies improve shipping efficiency, increase transparency and visibility in the supply chain, and speed up response time to consumer requests. Meanwhile, the research by Akram et al. (2022) discusses the use of digitization technology in supply chain data management for clothing production. The results of this study found several potential benefits of this technology, such as increasing efficiency, transparency, and security in the management data supply chain, as well as several challenges that might arise, such as cost implementation, system interoperability, and the ability to manage complex data. This research also shows some of the difficulties thaoccurredse in applying digitalization technology in clothing production supply chain data management, such as cost implementation, system interoperability, and the ability to manage complex data.

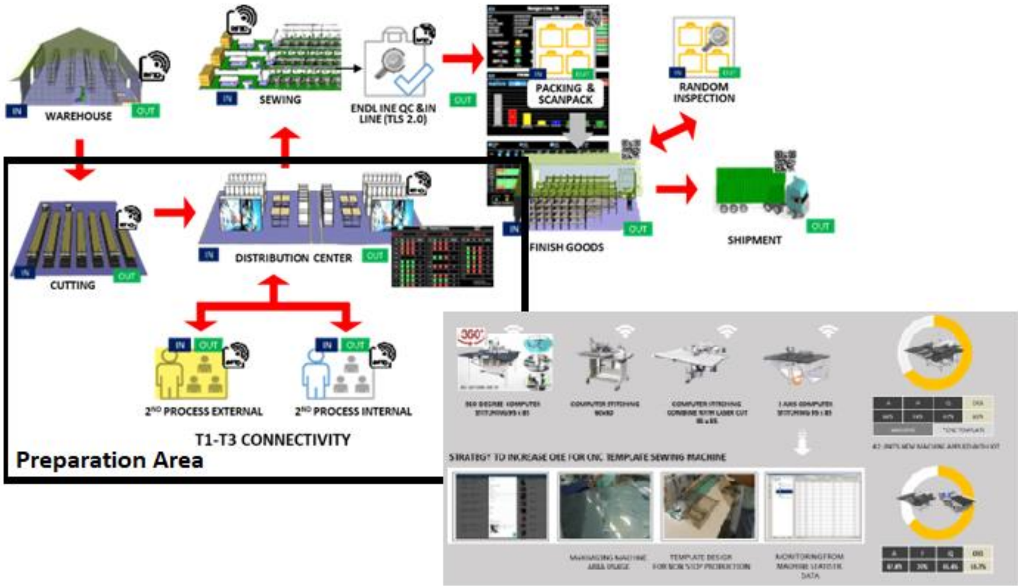
Furthermore, Pal & Yasar's (2020) research shows that integrating Internet of Things (IoT) technology can increase efficiency and security in managing supply chain data for clothing production. IoT enables real-time data collection from various sources along the supply chain. The results of this study explain the concept and definition of IoT technology and its advantages in clothing production supply chain data management and discuss the potential use of IoT technology in clothing production supply chain data management, such as increasing efficiency, transparency, and security in data management. In addition, it also shows some of the challenges that may arise in implementing IoT technology in clothing production supply chain data management, such as cost implementation, system interoperability, and the ability to manage complex data.

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

RFID (Radio Frequency Identification) is a wireless technology that automatically identifies and tracks objects using radio waves. This technology consists of RFID tags and RFID readers. An RFID tag is a device attached to an object and contains information about tithing, such as a serial number or product code. The RFID reader uses radio waves to read the information on the RFID tag, which is then sent to a database system for further processing (Preradovic & Karmakar, 2020). At the same time, the Internet of Things (IoT) is a technological concept that describes a connected network of physical devices, vehicles, and buildings equipped with technology to collect and exchange data automatically and continuously via the Internet (Hanafi, 2021). IoT focuses on collecting and processing data obtained from connected devices to turn it into useful and valuable information for users (Pal & Yasar, 2020). By utilizing RFID and IoT technology, users can monitor and control their devices more efficiently and increase efficiency and productivity in various fields (Nižetić et al., 2020), as shown in Figure 1, namely the application of RFID and IoT in the garment production process.

Figure 1

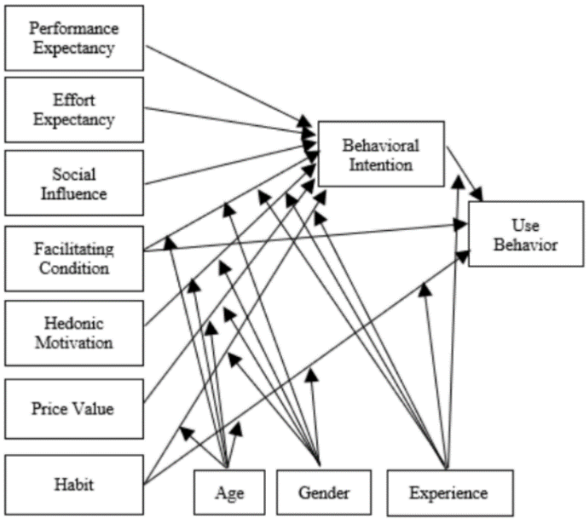
Application of RFID and IoT in the Garment production process



The Unified Theory of Acceptance and Use of Technology (UTAUT) is a technology acceptance model developed using various stages to track individual experiences with new technologies. This model integrates the previous eight theoretical models of technology acceptance. The UTAUT model has four structures that affect the intention to use technology: performance expectations, effort expectations, social influence, and supporting conditions (Venkatesh et al., 2003). The large number of studies that apply this model raises demands for an extension of the model. Different technologies, populations, and cultures allow for the emergence of new constructs. In addition, the addition of a new construct is also needed to suit a particular research context. So that the expansion of the UTAUT model was carried out. UTAUT2 was developed to provide a more specific model framework to complement the previous construction model, namely the UTAUT model. Three new constructs are added to this model: hedonic motivation, price value, and habit (Venkatesh et al., 2012). The UTAUT 2 model has good explanatory power in predicting individual interest in adopting and recommending the technology (Saragih & Rikumahu, 2022). The variables in the UTAUT2 model are shown in Figure 2.

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

Figure 2
Model UTAUT2



Where in the UTAUT2 Model consists of seven independent variables, namely:

a) Performance Expectancy, this performance variable shows that the individual believes using technology will improve performance and efficiency (Sampat & Sabbath, 2020).
b) Effort Expectancy, this variable leads to the extent to which individuals believe that technology is easy to use and understand so that they can be challenged in using it (Jakkaew & Hemrungrote, 2017).
c) Social Influence (Social Influence) This variable shows that social influence is determined by normative beliefs, namely whether the individual who is used as a reference approves or disapproves of carrying out a behavior (Montano et al., 2008.
d) Facilitating Conditions (Supporting Conditions), this variable states that individuals feel that the available technology and infrastructure will support them to adopt technology (Jakkaew & Hemrungrote, 2017).
e) Hedonic Motivation (Hedonic Motivation), this variable has a significant favorable influence on the interest in using technology; for example, the individual feels happy when using it (Jakkaew & Hemrungrote, 2017).
f) Price Value (Price Value), this variable is a sacrifice individuals must make to receive benefits from using technology. The price value becomes positive when the benefits of using technology are considered more significant than the costs (Venkatesh et al., 2012).
g) Habits (Habits), this variable indicates that practices positively influence behavioral intentions to adopt technology. User experience with technology improves after a certain period compared to the initial introduction (Jakkaew & Hemrungrote, 2017).

In the UTAUT2 Model, there are also two dependent variables, namely:

a) Behavioral Intention (behavioral intention to use), this variable indicates that the choice to use technology will drive the decision to adopt the technology (Alalwan et al., 2016).
b) Use Behavior; this variable shows usage behavior referring to the frequency of technology use by individuals (Venkatesh et al., 2012)

In addition, in the UTAUT2 Model, there are also three Moderation variables, namely:

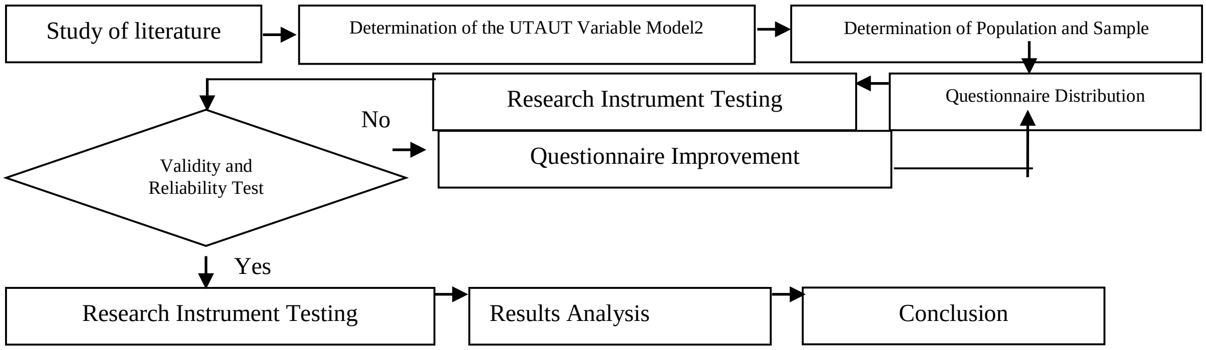
a) Age, this variable shows that influences affect their learning about new technologies; older consumers tend to face more difficulties processing new and complex technologies (Venkatesh et al., 2012).

b) Gender, this variable shows that cognition is related to gender roles in the use of technology, where men tend to be more oriented toward how to use it. In contrast, women tend to be oriented toward external support (Venkatesh et al., 2012).
c) Experience This variable indicates that experience can lead to habits of using technology and better knowledge structures to facilitate user learning, thereby reducing user dependency on external support (Venkatesh et al., 2012).

2. Method

The research approach used in this study is a quantitative approach using a survey method using a questionnaire. The survey was conducted online for PT Prima Sejati Sejahtera employees in the Preparation area using Google Forms. The research stages in this study are shown in Figure 3 as follows.

Figure 3
Research Stages



Literature study to examine and theoretically know the methods used in solving problems using the UTAUT2 model and how effective RFID and IoT are in the Digital Transformation process in Garment Companies. UTAUT2 Decision Variable Model. The variables used were selected based on previous research, which stated that a variable had a positive and significant effect on interest in using and using technology. Based on the explanation of the variables in previous research, the research framework can be determined a,s shown in Figure 4. The hypothesis of this research is as follows:

H1 : Performance Expectancy (PE) positively and significantly influences Behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies.

H2 : Effort Expectancy (EE) positively and significantly influences Behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies.

H3 : Social Influence has positive and significantly influencesavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies.

H4 : Facilitating Conditions have a positive and significantly influenceavior Intthe mention to use of RFID and IoT in the Digital Transformation process in Garment Companies.

H5 : Hedonic Motivation has a postpositively and significantly influenced the Intention to use RFID and IoT in the Digital Transformation process in Garment Companies.

H6 : Price Value positively and significantly influences behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies.

H7 : Abit has a positive and significant influence on the Use Behavior of using RFID

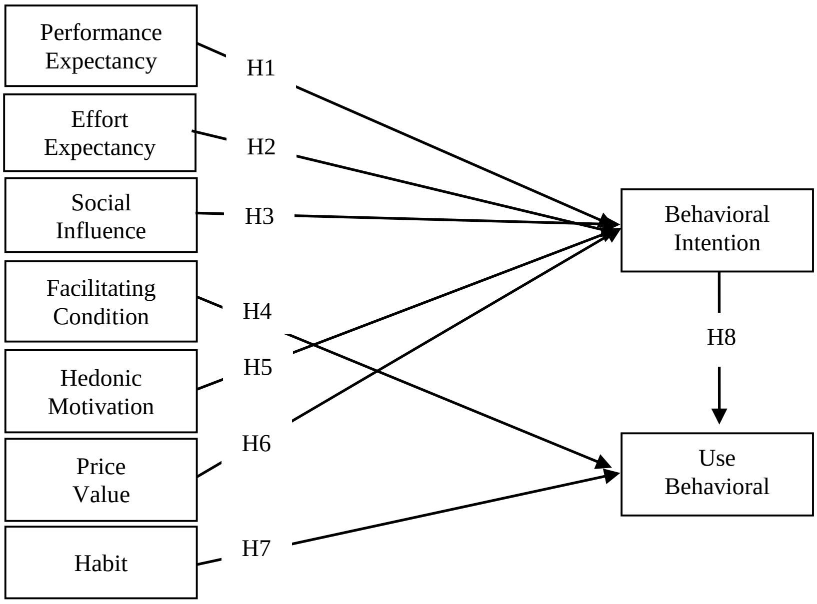
p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

Orginal Article

and IoT in the Digital Transformation process in Garment Companies.

H8 : Behavioral Intention positively and significantly influences the use Behavior of RFID and IoT in the Digital Transformation process in Garment Companies.

Figure 4
Making Research Thought With the UTAUT2 Model



The population of this study is the employees in the preparation area at PT Prima Sejati Sejahtera, which consists of the Cutting, Secondary Processing, g, and Distribution Center sections, totaling 375 employees. The sampling technique is a simple random sample, ng, where sampling is done randomly without regard to the existing strata in the population (Sugiyono, 2017). Sampling was used with a significance level of e = 5% using the Slovin formula. Based on the theologian formula, 193 research samples were obtained. The questionnaire was distributed to 193 employees at PT Prima Sejati Sejahtera in the preparation area without regard to existing strata such as gender, age, and work experience. The measurement scale uses a Likert scale, which is a scale to measure a person's attitude or opinion about an incident with a score of 5 points (Pranatawijaya et al., 2019). Answers on this scale use alternative explanations where a score of 1 is for Strongly Disaga, ree, two is for Disagree, a score of orea for Less Agree, a score of four is for Agree, and a score of 5 is for Strongly Agree.

This test is to determine the accuracy of the research instrument (validity) and measure the correctness of the variables used (Reliability) using SmartPLS ver 3.2.9 software. Validity and reliability testing is carried out. If the test results show that the instrument is declared valid and reliable, it can be used for the next stage. But if the device is not good, valid, or reliable, the questionnaire will be repaired and r paired, and the questionnaire will be distributed again. The validity test consists of 2 stages, namely convergent validity testing and discriminant validity testing. Concurrent validity testing uses the Average Variance Extracted (AVE) value > 0.5. The following equation measures the AVE value (Sholiha & Salamah, 2015).

$$AVE = \frac{\sum_{i=1}^{n} \hat{\lambda}_i^2}{\sum_{i=1}^{n} \hat{\lambda}_i^2 + \sum_{i=1}^{n} var(\hat{\varepsilon}_i)}$$

Meanwhile, for testing discriminant validity, it is measured by comparing the AVE squared

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

value, which must be greater than the correlation value of the latent variable. After the variable is declared valid, reliability testing is then carried out. Reliability testing can be done by looking at Cronbach alpha or composite reliability values. The reliability test, by looking at the Cronbach alpha value, will give a lower score, s it is more advisable to use composite reliability. The variable is declared reliable pr provided the Composite Reliability value is > 0.7. Composite reliability values are measured using the following equation (Sholiha & Salamah, 2015):

$$\hat{\rho} = \frac{\left(\sum_{i=1}^{n} \hat{\lambda}_i^2\right)^2}{\left(\sum_{i=1}^{n} \hat{\lambda}_i^2\right)^2 + \sum_{i=1}^{n} var(\hat{\varepsilon}_i)}$$

Evaluate the structural model by looking at the R-square and Q-square values. The R-square value is used to measure the level of variation between the independent variables and the dependent variable. Determining the R-square value with a value close to 1 is expressed as the higher the R-square value, the better the model used. Calculate the R-square value with the following equation (Sholiha & Salamah, 2015).

$$R^2 = \sum_{h=1}^{H} \beta_{jh}\, cor(X_{jh}, Y_j)$$

Furthermore, after obtaining the R-square, a Q-square test will be carried out to see predictive relevance, namely measuring how well the observed value is generated from the model used. Determining the Q-square value is if the Q-square value > 0 indicates the model has predictive relevance, whereas if the Q-square value < 0showss the model has less predictive relevance. Calculating the Q-square value uses the following equation (Sholiha & Salamah, 2015).

$$Q^2 = 1 - (1 - R_1^2)\,(1 - R_2^2)\,\ldots\,(1 - R_p^2)$$

To v Goodness of Fit (GoF) is used to validate the overall structural model. GoF index is a single measure to validate the combined measurement model's performance and model structure's performance (Sholiha & Salamah, 2015).$GoF = \sqrt{AVE\ x\ R^2}$
The GoF values range from 0 to 1 with the interpretation of the values: 0.1 (small GoF), 0.25 (medium GoF), and 0.36 (large GoF). At this stage, hypothesis testing is carried out by looking at the values in the t-statistic to determine a significant discount. If the value <0.05 and the t value is> 1.9en, it is declared valid and pract,ical and the hypothesis can be accepted.

3. Results and Discussion

In this study, a survey was conducted by distributing questionnaires using Google Forms to 193 employees at PT Prima Sejati Sejahtera in the preparation area without regard to existing strata, such as gender, age, and work experience.

Validity Test Results
Figure 5
Outer Loading Model

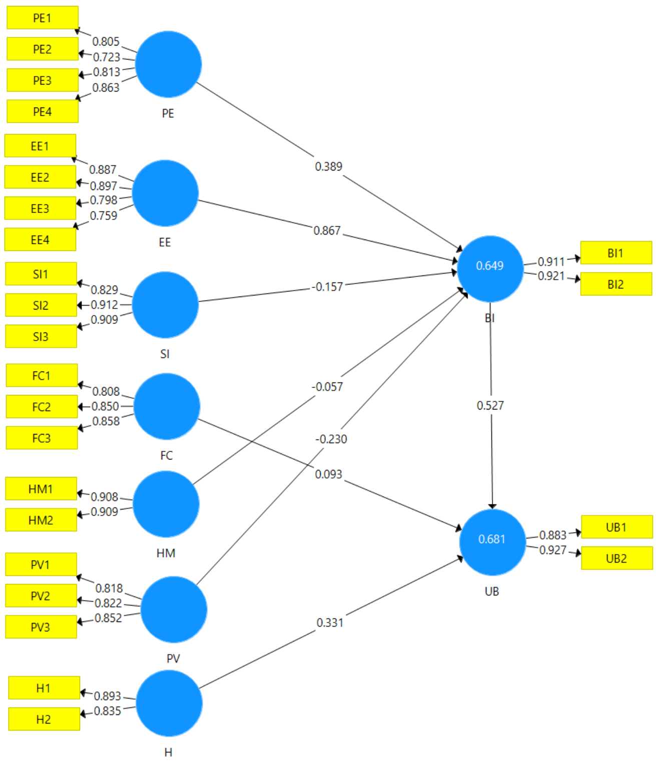


Table 1
Table of AVE Value Test Results

	Average Variance Extracted (AVE)
DUA	0,839
EE	0,701
FC	0,704
H	0,747
HM	0,825
Pe	0,644
PV	0,691
SI	0,782
WEB	0,820

Figure 5 shows the results of the Outer loading model where each variable has a value of more than 0.70, which means that all of these variables are valid, while based on Table 1, the AVE value for each variable is above 0.5, which means that the AVE value is above 0.5, which means that all the variable is declared valid so that the test can proceed to the discriminant validity testing stage.

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

Discriminant Validity Test Results
Table 2
Table of Discriminant Test Results

	DUA	EE	FC	H	HM	pe	PV	SI	UB
DUA	0,916								
EE	0,772	0,837							
FC	0,642	0,682	0,839						
H	0,551	0,631	0,503	0,864					
HM	0,631	0,639	0,495	0,765	0,909				
Pe	0,702	0,728	0,611	0,743	0,922	0,802			
PV	0,646	0,888	0,675	0,557	0,578	0,655	0,831		
SI	0,686	0,878	0,656	0,596	0,579	0,731	0,736	0,884	
UB	0,768	0,839	0,597	0,667	0,582	0,642	0,757	0,747	0,905

Validity testing can use discriminant validity by looking at the loading factor value table for each item more significantly than the value table. Based on the data in Table 2, namely the table of discriminant test results, all indicators have met the discriminant validity criteria. This is because each loading value of each indicatohandtent variablelargestlargemost considerable value with other loading values for other latent variables.

Reliability Test Results

Based on Table 3, the composite reliability value for each variable is more significant than 0.7, indicating that the indicators proposed by the researcher have good statistical values or are categorized as reliable so that the variables and indicators presented in this study can be used to assess academic information systems by measuring the level of user acceptance and satisfaction.

Table 3.
Table of Reliability Test Results

	Composite Reliability
DUA	0,913
EE	0,903
FC	0,877
H	0,855
HM	0,904
pe	0,878
PV	0,870
SI	0,915
UB	0,901

Structural Model Test Results

Test Results for the Coefficient of Determination (R^2)

After measuring the validity and reliability values, it will be followed by testing the structural model or inner model. To measure the structural model is calculated using R^2, where the results of this study are shown in Table 4.

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

Table 4
Table of Structural Model Test Results

	R^2	R^2 Customized
DUA	0,649	0,640
UB	0,681	0,676

The R^2 value for Behavioral Intention (BI) is 0.649, which means that Performance Expectancy, Effort Expectancy, Social Influence, Hedonic Motivation, and Price Value influence 64.9%. Furthermore, R^2 on Use Behavior is 0.681, which means that 68.1% of Use Behavior is influenced by the variables Facilitating Condition, Habit, and Behavioral Intention.

Predictive Relevance (Q^2)

$$Q^2 = 1 - (1 - R_1^2)\,(1 - R_2^2) \dots (1 - R_p^2)$$
$$Q^2 = 1 - (1 - 0.649)\ x\ (1 - 0.681) = 0.888$$

Based on the calculation results, it can be seen that the Q2 value is 0.888, so it can be concluded that the structural model in this study is good because the value of predictive relevance is close to 1.

Test results Goodness of Fit (GoF)

$$GoF = \sqrt{AVE\ x\ R^2} = \sqrt{0.75\ x\ 0.665^2} = 0.5759$$

The calculation result is 0.5759 or 57.59%, indicating that the diversity of data that the model can explain is 57.59%, and the remaining 42.41% is explained by other variables that have not been included in the model and errors.

Research Hypothesis Test Results

To get the hypothesis test and the path coefficient value, the test is carried out with the Bootstrapping function, where the results are shown in Table 5.

Table 5
Table of Research Hypothesis Test Results

	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	(|O/STDEV|)	Value P
BI -> UB	0,527	0,515	0,065	8.098	0.000
EE -> BI	0,867	0,852	0,165	5.268	0.000
FC -> UB	0,093	0,097	0,052	1.780	0,076
H --> UB	0,331	0,336	0,067	4.909	0.000
HM -> BI	-0,057	-0,059	0,111	0,514	0,607
PE -> BI	0,389	0,388	0,123	3.166	0,002
PV -> BI	-0,230	-0,216	0,111	2.065	0,039
SI -> BI	-0,157	-0,156	0,107	1.475	0,141

Based on the results of Table 5, it can be explained as follows.

H1 : Performance Expectancy (PE) has a positive and significant effect on Behavioral Intention using RFID and IoT in the Digital Transformation process in Garment Companies is acceptable because the t-statistic test result is 3.166, which has a value greater than 1.96 (t-value) and P Value of 0.002 which has a value smaller than 0.05.

H2 : Effort Expectancy (EE) has a positive and significant influence on Behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies, which is acceptable because the t-statistic test result is 5.268, which has a value greater than 1.96 (t-value) and a P-Value of 0.000 which has a value smaller than 0.05.

H3 : Social Influence has a positive and significant influence on Behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies; rejected because the t-statistic test result is 1.475, which has a value less than 1.96 (t-value) and P Value as much as 0.141 which has a value greater than 0.05

H4 : Facilitating Conditions have a positive and significant influence on Use Behavior Intention of using RFID and IoT in the Digital Transformation process in Garment Companies was rejected because the value of the t-statistic test results is 1.780, which is smaller than 1.96 (t-value). P the weig, ht is 0.076, with a value greater than 0.05.

H5 : Hedonic Motivation has a positive and significant influence on Behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies; rejected because the t-statistic test result is 0.514, which has a value smaller than 1.96 (t-value) and P Value as much as 0.607 which has a value greater than 0.05.

H6 : Price Value positively and significantly influences Behavioral Intention to use RFID and IoT in the Digital Transformation process in Garment Companies. This is acceptable because the value of the t-statistic test results is 2.065, which is greater than 1.96 (t-value). The deal is 0.039, which has a value of less than 0.05.

H7 : Habit has a positive and significant effect on Use Behavior using RFID and IoT in the Digital Transformation process in Garment Companies, which is acceptable because the t-statistic test result is 4.909, which has a value greater than 1.96 (t-value) and P Value as much as 0.000 which has a value less than 0.05.

H8 : Behavioral Intention has a positive and significant influence on Use Behavior using RFID and IoT in the Digital Transformation process in Garment Companies, which is acceptable because the t-statistic test result is 8.098, which has a value greater than 1.96 (t-value) and P A value of 0.000 which has a value smaller than 0.05.

4. Conclusion

The research that has been done to be able to explain that the level of employee acceptance of the use of RFID and IoT in the digital transformation process gets positive responses where the average value of each variable used is in the value range of 3.79 - 4.44 (scale 1 - 5) from a questionnaire distributed by sampling to 193 employees in the Preparation area. As for the results of testing the measurement model using UTAUT2, which was passed from the validity test, reliability test, and structural test using Smart PLS 3.2.9 that the value obtained is above the standard value so that it can be said to be valid and reliable for the data obtained. Moreover, from the results of the hypothesis testing analysis, 3 hypothesis variables are accepted and positively affect behavioral intentions to use RFID and IoT in the Digital Transformation process, namely Performance Expectancy, Effort Expectation, and Price Value. 2 hypothesis variables are accepted and affect behavior the use of RFID and IoT in the Digital Transformation process, namely Habit and Behavioral Intention. As for the Social Influence and Hedonic Motivation variables on behavioral intention to use RFID and IoT in the Digital Transformation process and the Facilitating Condition variable on the behavior of using RFID and IoT in the Digital process, no positive influence was found.

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

5. References

Ahmad, S., Miskon, S., Alabdan, R., & Tlili, I. (2020). Towards sustainable textile and apparel industry: Exploring the role of business intelligence systems in the era of industry 4.0. *Sustainability*, *12*(7), 2632.

Akram, S. V., Malik, P. K., Singh, R., Gehlot, A., Juyal, A., Ghafoor, K. Z., & Shrestha, S. (2022). Implementation of digitalized technologies for fashion industry 4.0: Opportunities and challenges. *Scientific Programming*, *2022*. https://doi.org/10.1155/2022/7523246

Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Williams, M. D. (2016). Consumer adoption of mobile banking in Jordan: Examining the role of usefulness, ease of use, perceived risk and self-efficacy. *Journal of Enterprise Information Management*, *29*(1), 118-139.

Anjani, AA, & Hasma, H. (2022). Analisis Perancangan Sistem Informasi Akuntansi Penjualan Tunai Pada Toko Berkah Jaya. *Jurnal Kesehatan Sains*, *3*(4), 653–673. https://doi.org/10.46799/jsa.v3i4.421

Hanafi. (2021). Dasar - dasar FINTECH. CV Aswaja Pressindo.

Jakkaew, P., & Hemrungrote, S. (2017, March). The use of UTAUT2 model for understanding student perceptions using Google classroom: A case study of introduction to information technology course. In *2017 international conference on digital arts, media and technology (ICDAMT)* (pp. 205-209). IEEE. https://doi.org/10.1109/ICDAMT.2017.7904962

Kudryavtseva, T. Y., Kozhina, K. S., Prause, G. K., & Olaniyi, E. O. (2023). Assessment of Economic Efficiency, Effects and Risks of Digitalization Projects of Garment Industry in Russia. *Journal of Applied Economic Research. 2023. Vol. 22.№ 1*, *22*(1), 72-98. https://doi.org/10.15826/vestnik.2023.22.1.004

Montano, D. E., & Kasprzyk, D. (2008). Theory of Reasoned Action, Theory of Planned Behavior and the Integrated Model. Glanz, K. Rimer, b., Vlswanath, K., Eds. (4th Ed). Health Behaviour and Health Education, 67-96.

Nayak, R., George, M., Haq, I. U., & Pham, H. C. (2022). Sustainability benefits of RFID technology in Vietnamese fashion supply chain. *Cleaner Logistics and Supply Chain*, *5*, 100086. https://doi.org/10.1016/j.clscn.2022.100086

Nižetić, S., Šolić, P., Gonzalez-De, D. L. D. I., & Patrono, L. (2020). Internet of Things (IoT): Opportunities, issues and challenges towards a smart and sustainable future. *Journal of cleaner production*, *274*, 122877.

Norman, F., & Alamsjah, F. (2020). Key factors to promote Industry 4.0 readiness at Indonesian textile and clothing firm. Engineering, MAthematics and Computer Science (EMACS) Journal, 2(2), 73-83.

Pal K, Yasar A-U-H (2020) Internet of Things and blockchain technology in apparel manufacturing supply chain data management. Procedia Comput Sci 170:450–457. https://doi.org/10.1016/j.procs.2020.03.088

Pranatawijaya, VH, Widiatri, W., Priskila, R., & Putra, PBAA (2019). Penerapan Skala Likert dan Skala Dikotomi Pada Kuesioner Online. *Jurnal Sains Dan Informatika*, *5*(2), 128–137. https://doi.org/10.34128/jsi.v5i2.185

Prasetyawati, M., Sudarwati, W., & Mujiastuti, R. (2020). Analisis Proses Bisnis Pada Industri Garmen Di Perkampungan Industri Kecil Penggilingan. Seminar Nasional Penelitian LPPM UMJ. http://jurnal.umj.ac.id/index.php/semnaslit

Preradovic, S., Karmakar, N. C., & Balbin, I. (2008). RFID transponders. *IEEE microwave magazine*, *9*(5), 90-103.

Sampat, B., & Sabat, K. C. (2020). Antecedents to continuance intention to use eGovernment services in India. In *Re-imagining Diffusion and Adoption of Information Technology and Systems: A Continuing Conversation: IFIP WG 8.6 International Conference on*

p-ISSN: **1693-7945**
e –ISSN: **2622 - 1969**

Transfer and Diffusion of IT, TDIT 2020, Tiruchirappalli, India, December 18–19, 2020, Proceedings, Part I (pp. 284-291). Springer International Publishing. https://doi.org/10.1007/978-3-030-64849-7_25

Santini, N. L. K. A., & Baskara, I. G. K. (2018). *Pengaruh Perputaran Modal Kerja, Ukuran Perusahaan dan Likuiditas Terhadap Profitabilitas Perusahaan Tekstil dan Garmen* (Doctoral dissertation, Udayana University).

Saragih, Y. W., & Rikumahu, B. (2022). Analisis Faktor Adopsi E-Wallet Gopay, OVO, dan DANA dengan Model UTAUT2 pada Masyarakat Jawa Barat. *Nominal Barometer Riset Akuntansi dan Manajemen*, *11*(1), 98-121.https://doi.org/10.21831/nominal.v11i1.43075

Sholiha, E. U. N., & Salamah, M. (2016). Structural equation modeling-partial least square untuk pemodelan derajat kesehatan kabupaten/kota di Jawa Timur (studi kasus data indeks pembangunan kesehatan masyarakat Jawa Timur 2013). *Jurnal Sains dan Seni ITS*, *4*(2).

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: CV. Alfabet.

Tan, W. C., & Sidhu, M. S. (2022). Review of RFID and IoT integration in supply chain management. *Operations Research Perspectives*, *9*, 100229. https://doi.org/10.1016/j.orp.2022.100229

Trilaksono, B., Pringgo, E., & Laksono, W. (2022, 5 April). Penyiapan Pasokan Lini Produksi Melalui Kapasitas Menggunakan Model Simulasi Pada Industri Garmen. *Prosiding Konferensi Internasional tentang Teknik Industri dan Manajemen Operasi Nsukka*.

Unhelkar, B., Joshi, S., Sharma, M., Prakash, S., Mani, A. K., & Prasad, M. (2022). Enhancing supply chain performance using RFID technology and decision support systems in the industry 4.0–A systematic literature review. *International Journal of Information Management Data Insights*, *2*(2), 100084. https://doi.org/10.1016/j.jjimei.2022.100084

Venkatesh, V., Smith, R. H., Morris, M. G., Davis, G. B., Davis, F. D., & Walton, S. M. (2003). Quarterly User Acceptance Of Information Technology: Toward A Unified View1.

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178