Evaluation of ERP Oracle NetSuite Implementation Using the Unified Theory of Acceptance and Use of Technology (UTAUT) Model to Create a Sustainable Business

Frihardina Marsintauli1*, and Mulia Sari1
1Accounting Department, BINUS Online Learning, Bina Nusantara University, Jakarta, Indonesia 11480

Abstract. This study aims to evaluate using ERP Oracle NetSuite to support a company's business processes with the UTAUT model. Oracle NetSuite is the first company engaged in data storage in the cloud. The UTAUT model has four main factors: performance expectations, effort expectations, social influence, and facility conditions, influencing the system's user acceptance level. The total number of respondents obtained was 84 Oracle Netsuite users, and the data were processed using SEM-PLS. The results of this study indicate that performance expectations significantly affect user intentions, and user intentions significantly affect use behavior. In contrast, effort expectations, social influence, and facilitating conditions do not significantly affect user intentions. This research concludes that the difficulty level using Oracle Netsuite is considered relatively high. However, this system will still be used because management has committed to improving the quality of data processing and analysis, and Oracle Netsuite is deemed sufficient to accommodate this.

1 Introduction

Developing a company's business is often followed by increasing productivity and internal control challenges. The greater the volume of a business, the greater the risks that will arise. Companies need accurate financial data to determine whether the company is progressing, detect fraud and leaks, and make appropriate and accurate decisions related to economic and non-financial performance [1]. Financial reports are the language of business because accounting is a tool used to convey financial information to parties who need this information. To accommodate all these needs, companies need an integrated information system.

Data is a critical company needs for the company's survival [2]. The sustainability of the company appears when the company can produce valid and fast data by processing and analyzing data to be considered by the company in making decisions [3]. Companies with potential resources that need a system to integrate all related units are called Enterprise Resource Planning (ERP). The use of ERP will facilitate the planning and management of company resources. ERP automates all business processes, controls and collects input from various data. The data in question includes accounting, manufacturing, supply chain, sales, and marketing data, for human resources.

ERP contributes to the development of a business, including increasing revenue, reducing costs, increasing market value [4], productivity [5], quality decision-making [6], and other organizational processes. ERP systems enable a transparent flow of information within the enterprise ecosystem, which improves supply chain efficiency [7].

Entering the era of society 5.0, integrated cloud-based Enterprise Resource Planning (ERP) has become necessary for companies that wish to obtain up-to-date, real-time, and accurate information. ERP systems on the market are only sometimes cloud-based, called conventional ERP or In-House ERP. Traditional ERP is an ERP system installed locally on hardware and computers owned and managed exclusively by the company's IT team. With the advantages and disadvantages of each, many companies are now switching to cloud-based ERP because, apart from being cheaper, cloud-based ERP is more real-time and speeds up the flow of information.

However, a system sometimes needs to be revised in its implementation. With the use of information systems and providing many benefits, some organizations need to implement them. Many systems development projects fail to produce usable systems. The cause of failure of the application of information systems is due to internal and external factors [8]. Implementing Oracle Netsuite has generated mixed reactions in user attitudes and behavior. Feelings of acceptance and rejection will emerge and become a dimension of attitude towards using information systems.

For this reason, this study wants to examine the evaluation of the level of user acceptance of ERP Oracle NetSuite using the Unified Theory of Acceptance and Use of Technology (UTAUT) research model. However, by using the UTAUT model there are

* Corresponding author: frihardina.marsintauli@binus.ac.id
differences in the results. Some variables from the UTAUT model are believed to be able to encourage someone to have the intention of using the system. Just as performance expectancy has a positive effect on behavior intentions [9–11], effort expectancy does not affect behavior intentions [12]. Social influence affects behavioral intentions [13], but their research [14] found that social impact does not have a positive effect on behavioral intentions. Facilitating conditions affect behavior intentions [15]. Still, other studies state that facilitating conditions have no impact on behavioral intentions [16, 17] and behavioral intentions influence use behavior [18], but the results of research by [19] explain no influence on usage behavior. The difference in the results of previous research indicates that the UTAUT model needs to be studied further to ensure that this model can be applied in general to a system to be evaluated.

Based on the background stated above, the formulation of the problem in this study is whether performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention affect behavioral intention in implementing Oracle Netsuite.

2 Literature review

2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Technology Acceptance Model (TAM) model is the most frequently used of the various models regarding user acceptance of technology. Although research has been carried out to validate its ability to estimate the use of information systems, TAM has incompleteness limitations because it needs to consider one important factor, namely social influence in the service and utilization of new technology. TAM also does not consider the obstacles preventing individuals from using specific systems they want to use [20].

The Unified Theory of Acceptance and Use of Technology (UTAUT) model is an integrated model, the development of the TAM model, which was developed by [8] based on a cognitive, social theory with a combination of eight leading research models regarding information technology acceptance [21]. The UTAUT model successfully explains up to 70% of user variance in information technology acceptance.

The UTAUT model [13] has four fundamental constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions that influence behavioral intentions to use technology.

Performance expectancy is the extent to which a person believes using a particular system will increase performance. Performance expectancy has three constructs: usefulness, quickness, and productivity.

Effort expectancy is the system's ease of use that can reduce a person's effort (effort and time) in doing his job. The indicators of effort expectancy are complexity and ease of use.

Social influence can be interpreted as the degree to which a person thinks other people have convinced him to use a new system or convince someone to switch to a new one. There are two social influence factors: social factors and subjective norms.

Facilitating conditions are defined as the degree to which a person believes that the existing infrastructure can support the use of the system or the degree to which a person is satisfied with the existing infrastructure. Adequate facilities can positively influence someone to grow an interest in using information systems.

Behavioral intentions are defined as the possibility that a person feels (person's perceived likelihood) or subjective likelihood that someone will engage in a given behavior. According to [22], behavioral intentions are conditions where customers have an intention or attitude of being loyal to a brand, product, or company and willingly share their superiority with other parties. There are two dimensions in behavioral intentions, the first is the intention, which is the level of the user's intention to continue using the system, and the second is the continuation, which means the extent to which the user plans to continue using the information system.

Use behavior is defined as the intensity or frequency of the user in using the information system [13]. In many empirical studies, use behavior is always the dependent variable. Someone will use the system if they believe it helps to complete their work.

2.2 Oracle NetSuite ERP system

Oracle is a technology company founded by Larry Ellison and Bob Miner in 1977. Oracle completed its acquisition of Netsuite in November 2016 and became the first company engaged in data storage in the cloud. In Indonesia alone, Oracle Netsuite was just introduced in 2017. Now Oracle Netsuite provides cloud-based ERP services and omnichannel software trading that more than 32,000 companies have used in 217 countries.

Oracle Netsuite generally offers integrated solutions for end-to-end business processes in accounting and finance, supply chain and inventory management, sales and marketing, project management, e-commerce, and customer relation management (CRM).

2.3 Performance expectancy and behavioral intention

The use of specific systems is influenced by the user's belief that using the system will be able to complete their work. Measuring the PE construct, namely usability, speed, and productivity, will affect one's intention to use a system. Performance expectations consistently positively influenced interest in using information systems [23]. Based on this, the hypothesis being tested is:

H1: Performance expectancy has a positive and significant effect on Behavioral Intention

2.4 Effort expectancy and behavioral intention

Effort Expectancy is the system's ease of use that can reduce a person's effort (effort and time) in doing his job. Indicators of effort expectancy, namely complexity
and ease of use, are keys to the system's success in supporting user expectations. The frequency of use and interaction between the user (user) and the system can also show the ease of use. The system used more often indicates that it is better known, easier to operate, and easier to use by its users [13]. This argument is supported by previous research, namely [13] that found that effort expectancy influences behavioral intentions. Based on this, the hypothesis being tested is:

H2: Effort expectancy has a positive and significant effect on Behavioral Intention

2.5 Social influence and behavioral intentions

In this digitalization era, companies must integrate operational activities using a system to obtain real-time data. With the renewal of this business process, social influence or other people to use the new system or convince someone to switch to the new system. There are two social influence factors: social factors and subjective norms. It is supported by the research results of [13] that social influence influences behavioral intentions. Based on this, the hypothesis being tested is:

H3: Social influence has a positive and significant effect on Behavioral Intention

2.6 Facilitating condition and behavioral intentions

Facilitating conditions are defined as the degree to which a person believes that the existing infrastructure can support the use of the system or the degree to which a person is satisfied with the existing infrastructure. The existence of facilities provided by the company supported by system functions that support work will encourage user intentions to use a system. This argument follows the results of [15] that facilitating conditions positively influence behavioral intentions. Based on this, the hypothesis being tested is:

H4: Facilitating condition has a positive and significant effect on Behavioral Intention

2.7 Behavioral intentions and use behavior

In this study, behavioral intentions are used to describe how much users desire to use Oracle NetSuite continuously. The final stage of the evaluation process is the user's desire to continue using and recommending the system to others. While use behavior is used to describe the level of user awareness in using Oracle NetSuite to support daily work. Someone will use the system if they believe it helps help to complete their work.

This argument is supported by previous research by [24] showing that behavioral intentions significantly affect use behavior. Based on this, the research hypothesis is:

H5: Behavioral intention has a positive and significant impact on Use behavior

3 Methodology

In this study, the object of research used is Oracle NetSuite system users. This study uses a Likert scale with a score of 1 which means strongly disagree, and a score of 5 which means strongly agree. The questionnaire was adopted from [13]. The data collection method used was a questionnaire using a Google form containing a list of questionnaire questions. The respondents in this research are all the employees in a fast food and beverage company familiar with this system. The total number of respondents and processed data is 84 active users of Oracle NetSuite. The sampling technique that will be used is probability sampling, where all samples have an equal opportunity to become the object of research.

4 Results

Table 1 shows the demographics of the respondents, which shows that the majority of respondents are male in the age range of 24-29 years with a frequency of active daily use.

<table>
<thead>
<tr>
<th>Age</th>
<th>Respondents</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-23 Years</td>
<td>4</td>
<td>4.76%</td>
</tr>
<tr>
<td>24-29 Years</td>
<td>40</td>
<td>47.62%</td>
</tr>
<tr>
<td>30-35 Years</td>
<td>32</td>
<td>38.10%</td>
</tr>
<tr>
<td>36-40 Years</td>
<td>7</td>
<td>8.33%</td>
</tr>
<tr>
<td>&gt;40 Years</td>
<td>1</td>
<td>1.19%</td>
</tr>
</tbody>
</table>

This quantitative study aims to evaluate the use of an ERP system called Oracle NetSuite using the UTAUT method. The UTAUT method is measured by variables in the form of performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intentions, and behavioral intention towards use behavior. This study uses the SEM-PLS method in data processing.

4.1 Convergent validity and reliability test

Convergent validity testing aims to determine the validity of each relationship between indicators and constructs or latent variables. In this study, a loading factor limit of 0.60 will be used.

From the results of the outer loadings in Figure 1, it can be seen that all indicators have a value above 0.60. In other words, the outer loadings are declared to meet the requirements so that they can be continued for the next stage of measurement.

The Average Variance Extracted (AVE) value that meets the requirements is greater than 0.50 [25]. Table 2 show all variable values obtained exceed 0.50. In other words, each variable is valid. From the results of the outer loadings above, it can be seen that all indicators have a value above 0.60. In other words, the outer loadings are declared to meet the requirements so that they can be continued for the next measurement stage.
Fig. 1. Path diagram of the UTAUT evaluation model with outer loadings values.

Table 2. Validity and reliability test result.

<table>
<thead>
<tr>
<th>OL</th>
<th>Composite reliability (( \rho_a ))</th>
<th>Composite reliability (( \rho_c ))</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>0.976-0.979</td>
<td>0.957</td>
<td>0.955</td>
</tr>
<tr>
<td>EE</td>
<td>0.863-0.906</td>
<td>0.919</td>
<td>0.935</td>
</tr>
<tr>
<td>FC</td>
<td>0.739-0.878</td>
<td>0.917</td>
<td>0.929</td>
</tr>
<tr>
<td>PE</td>
<td>0.797-0.929</td>
<td>0.974</td>
<td>0.775</td>
</tr>
<tr>
<td>SI</td>
<td>0.813-0.916</td>
<td>0.739</td>
<td>0.856</td>
</tr>
<tr>
<td>UB</td>
<td>0.879-0.961</td>
<td>0.923</td>
<td>0.853</td>
</tr>
</tbody>
</table>

Based on Table 2, the results of the composite reliability test show that all latent variable values have a value of more than 0.70. However, in Cronbach’s alpha test results, some variables need to meet the test criteria where the value is less than 0.70, namely the social influence variable with a value of 0.675. The composite reliability value meets the criteria with the value of all variables greater than or equal to 0.70. Thus the social influence variable can be accepted for its reliability from the given composite reliability value.

4.2 Discriminant validity test

Discriminant validity occurs when two different instruments measure two constructs that are predicted to be uncorrelated to produce scores that are not correlated.

4.2.1 Fornell-Larcker criterion

A construct is valid by comparing the root value of AVE (Fornell-Larcker Criterion) with the correlation value between latent variables. The AVE root value must be greater than the correlation between latent variables. If the AVE square root value of each construct is greater than the correlation value between the constructs and the other constructs in the model, then the model is said to have good discriminant validity [26].

Table 3. Fornell-Larcker criterion.

<table>
<thead>
<tr>
<th></th>
<th>BI</th>
<th>EE</th>
<th>FC</th>
<th>PE</th>
<th>SI</th>
<th>UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>0.977</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td>0.618</td>
<td>0.885</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>0.580</td>
<td>0.604</td>
<td>0.808</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>0.799</td>
<td>0.788</td>
<td>0.639</td>
<td>0.869</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>0.623</td>
<td>0.498</td>
<td>0.646</td>
<td>0.610</td>
<td>0.866</td>
<td></td>
</tr>
<tr>
<td>UB</td>
<td>0.867</td>
<td>0.688</td>
<td>0.666</td>
<td>0.807</td>
<td>0.581</td>
<td>0.924</td>
</tr>
</tbody>
</table>

Table 3 shows that there is no value greater than the diagonal value being compared. Thus it can be interpreted that the data in the Fornell-Larcker calculation is valid.

4.3 Model structural evaluation

4.3.1 R-square

R-square is done to see how much the independent variables provide all the information needed to predict and how much the effect variable can be explained by the cause variable.

Table 4. R-Square calculation results.

<table>
<thead>
<tr>
<th></th>
<th>R-Square</th>
<th>R-Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>0.669</td>
<td>0.653</td>
</tr>
<tr>
<td>UB</td>
<td>0.752</td>
<td>0.749</td>
</tr>
</tbody>
</table>

From Table 4, the variable behavioral intentions are explained by the four variables PE, EE, IS, and FC of 66.90%, while other variables explain the remaining 33.10%. The use behavior variable is explained by one BI variable of 75.20%, while other variables explain the remaining 24.80%.

According to [27], the R-Square value is categorized as strong if it is more than 0.67, moderate if it is more than 0.33 but lower than 0.67, and weak if it is more than 0.19 but lower than 0.33. Thus the behavioral intentions variable model explained by the PE, EE, IS, and FC variables is categorized as moderate, and the use behavior variable model explained by the BI variable is categorized as strong.

4.3.2 F-square

F-square is done to assess the magnitude of the influence between variables to assess whether or not there is a significant relationship between variables [28]. The f-square value is 0.02 as small, 0.15 as medium, and 0.35 as large. Values less than 0.02 can be ignored or considered as having no effect [29].

Based on the results of the f-square calculation, it was found that the influence of the BI variable on the...
The level of difficulty using Oracle NetSuite is considered relatively high. However, this system will still be used because management has committed to improving the quality of data processing and analysis, and Oracle NetSuite is deemed sufficient to accommodate this. This research is not in line with [24, 31, 32].

Table 6 shows that the significant value of the social influence variable is 0.074 > 0.05, which can be concluded that social influence does not affect behavioral intentions but is not in line with research [16], which states that social influence influences behavioral intention. It is because users cannot choose not to use Oracle NetSuite in their work. After all, this is mandatory so that the social influence variable does not affect the user's interest in using Oracle NetSuite.

Based on Table 6, it shows that the significance value of the facilitating condition variable is 0.780 > 0.05. It can be concluded that facilitating conditions have no effect on behavioral intentions. The results of this study are in line with research conducted by [16, 17] [24] which states that the facilitating condition variable does not affect behavioral intentions. However, the results of this study contradict research [15] which states that facilitating conditions significantly affect behavioral intentions. The higher the level of ease in using a system, the higher the value of user trust in the organizational and technical infrastructure available, and the higher the acceptance and use of a system. Logically, the more complete the facilities that support the use of the system, the more the system will be accepted and used by users.

Table 6 shows that behavioral intentions have a significance value of 0.000 < 0.05. It can be concluded that behavioral intentions significantly positively affect use behavior. This study's results align with research conducted by [18] which states that behavioral intentions influence behavior. However, the results of this study are in contrast to research conducted by [19] which states that convenience or behavioral intentions have no significant effect on use behavior. The higher the user's intention to use Oracle NetSuite, the Oracle NetSuite system will still be used. Users believe using Oracle NetSuite can provide added value and support their daily work.

5 Conclusion

This study aims to evaluate an Oracle NetSuite accounting system that companies use to disclose valid financial information to users of financial statements and accounting system that companies use to disclose valid financial information to users of financial statements. The results of this study indicate that performance expectancy has a positive effect on behavioral intentions. In contrast, the variables effort expectancy, social influence, and facilitating condition do not affect behavioral intention. In addition, the behavioral intention has a positive effect on use behavior. It shows a person's belief that using an information system will help him gain performance benefits from his work. People's behavior can be seen
from their intention to use an information system. Someone will use the system if they believe it helps to complete their work. However, from the results of this study, it can be seen that the user’s belief that the system helps in completing their work is different from the evaluation related to effort expectancy in which ERP Oracle is considered problematic in the operating process. The level of difficulty using Oracle Netsuite is considered relatively high. However, this system will still be used because management has committed to improving the quality of data processing and analysis, and Oracle Netsuite is deemed sufficient to accommodate this. The results of this study contribute to companies that are starting to move towards an integrated ERP implementation process which needs to be evaluated by users to ensure that the acceptance of this system meets their needs or is it a system failure that has an impact on the company’s sustainability. Even though the company has implemented ERP in its company, it is still being determined that ERP is able to produce valid and fast information because it needs user support in the process of operating and monitoring up to the process of presenting reliable data.

This research has limitations, namely in the data collection process, the information provided by respondents through questionnaires sometimes does not show the actual opinions of respondents, this occurs because of different thoughts, assumptions, and different understandings of each respondent and also other factors such as honesty and personal sentiments in filling out the opinions of respondents in the questionnaire. Second, the distribution of this questionnaire was only carried out in one company, it is hoped that in future research it will be distributed to other companies to ensure that the results are able to be in-depth and disseminated in the process of evaluating this system.

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