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Digital Era Paradox: Integrating Technology Acceptance Model with Governance Risk & Compliance to Reduced the Perceived Digital Risk

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Abstract

Today societies are highly dependent to digital. This dependency is called Digital Darwinism (Institut Akuntan Publik Indonesia (IAPI).2015). This paper analyses customer’s behavior in digital era. Customer behavior were learned and become one of the factors of digital implementation paradox. The paper found that Professional due care is important to analyze customer behavior. The paper identifies the gap between company’s readiness with technology acceptance to deal with customer’s trust and the increase of perceived digital risk. The results of this paper will find the best technology acceptance model base on literature studies and actual cases in companies. The result of this paper is the extension of the Technology Acceptance Model by focusing on the mean of reducing perceived digital risk with Governance Risk and Compliance.

1. Background

Digital era has increase digital dependency and cause societies to struggle for their existence. In auditor terms, this phenomenon is called digital Darwinism [6]. According to Darwin, the struggle of company could happen because societies can adapt to technology faster than the companies themselves. The evolution of companies will naturally occur if the company cannot survive [14]. In the era of Digital Darwinism, there are three dominant traits to survive that consist of relevance, interactivity, accountability [19]. In marketing perspective, Digital Darwinism is a main challenge to all companies. The digital environments changes create challenges for every company that uses IT as their services. IT services may give companies a lot of advantages, but there will be some paradox if companies don’t know how to accept the risk and control the internal and external behavior.

Governance plays important roles in this era. Governance ensures the enterprise objectives are achieved by effective monitoring.

Technology acceptance is a key of corporate success nowadays. Technology acceptance in Indonesia should be accompanied by the awareness of technological risk and an act to response to the risk. A lot of companies will struggle when they have to adopt technology in their companies. There are risks which have not been foreseen by companies. Perceived risk in Technology Acceptance Model have been found in various studies. Some of them resulted in people readiness and behavioral uncertainties. Perceived risk has been added to technology acceptance model for increasing managerial focus to create corporation’s safer and more effective technological use [9]. Those risks can result from the gap of management expectancies to technology effectiveness and outcome, or can be called as paradox. Base on companies’ point of view, the paradox of technology resulted comes from companies' survival to adopt the technology [2].

In author audit experienced, technology doesn’t make the financial audit process easier, but also more complex. Technology adoption makes every audit has to be done by internal audit first to assess the risk level, and followed by external audit process. The awareness of people have become the major factor in the problem arises in IT audit. The impacts of perceived risk with technological adoption also have been studied in various studies, such as internal banking [4]. This paper also wants to investigate about the awareness and the risk response of technology adoption and the impact to perceived risk.

The needs to understand of costumer behavior and implement the technology governance in the company are important. This era will create more unauthorized access and modification of access that lead to the vulnerabilities of company. Modification of access can resulted not only from internal but also external.

Companies have to protect themselves and all of their customer by implementing IT Governance Risk and Compliance (IT GRC) to increase the efficiency and the effectiveness of the digital. This
paper discusses professional due care including customer monitoring, customer due diligence and access management in the relation to decrease digital risk.

The research problems are as follows:

- How to control the customer behavior in digital era with professional due care?
- How to decrease the perceived digital risk in technological acceptance?

According to the audit experience, author will explain today’s situation and create a model, which added the IT GRC factors, that impact to increasing the readiness of technological acceptance and reducing the effect of perceived risk.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

Davis (1986) has introduced Technology Acceptance Model (TAM). This study assess the extension Theory of Reasoned Action (TRA) as a part of Technology Acceptance Model by combining IT GRC model. Author developed a new model to assist companies in managing their internal and external misused of information system or intention to conduct unethical things [10]. There were many of researches in the area of Technology Acceptance Model (TAM). Perceived risk is the factor that decrease perceived benefit of IT [3]. To make it efficient, companies should decrease perceived risk of digital adoption.

Recently, TAM has found perceived risk as the factor that could reduce intention to use. A study of Technology Perceived Behavior has also been conducted in the area of customer satisfaction [13].

There are number of models explaining the acceptance of new technologies. There are also researches that combine TAM with behavioural science because the use of e-commerce [15]. The research that combines TAM with perceived risk as one of behavioral science, is shown in figure 1 below,

![Figure 1. Featherman and Pavlou (2003)](image)

2.2 Perceived Risk

Featherman and Pavlou have measured perceived risk that could reduce the perceived usefulness and perceived ease of use to the digital implementation. [3].

2.3 IT-Governance Risk Compliance

Previous study has developed integrated model of IT and GRC. High level process of IT GRC have integrated IT governance, IT Risk Management, and IT Compliance [14]

2.4 Technology Perceived Behavior

Human behavior was found to be the important factor of TPB and affected attitude and human behavior [5]. Recently many studies were conducted to understanding the user behavior toward user technology acceptance.
2.4.1 Customer Due Diligence
Customer due diligence is a part of internal control. Companies, especially financial companies have to strengthen their policy and procedure in this digital era [20]. The practice of customer due diligence and the monitoring of customer’s transaction become more important to know the customer’s behaviour in digital era [7].

2.5 Professional Due Care
Professional Due care means the company’s readiness in technology adoption and preparedness of its risk reduction. It can be done by regulating customer monitoring, customer due diligence and strengthen the access management.

A study has found the factor that support and can help customer to overcome the internal and external risk. Base on the journal that examining multidimensional risk, they could be reduced by some factors. The major factor, which are self-efficacy or the perceived capability, trust disposition and structural assurance or trust toward technology have been found could give impact to reduce the risk [13]. That studyr didn’t include the GRC factor which found in this study can be another major factor to reduce the risk.

3. Research Method

For that objective, author created an extent of Technology Acceptance Model according to two field studies. The dimension of this study is to overcome the risk perception by implementing these following steps:
• Literature studies in various journals.
• Field studies by observing the result of company’s internal audit in 2015.

This paper discussed about the implementation of digital service to customers that conducted by several companies. Professional due care to implement regulation has found more important in this study according to the increasing of digital risk nowadays.

4. The case of IT –GRC

Data Sample

Study 1. First author study of IT-GRC Risk [16] It can be illustrated as below

<table>
<thead>
<tr>
<th>2015 Period (Monthly)</th>
<th>Total of PT. ABC’s User</th>
<th>Reporting System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PT. ABC’s Manual Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>External</td>
<td>Internal</td>
</tr>
<tr>
<td>1</td>
<td>65</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>63</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>66</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>58</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 2 Total of PT. ABC user

System should be monitored regularly to ensure the accuracy of data in the system. It needs the professional due care to monitor and ensure the customer’s identities had been corrected before the input process to the system. To ensure the compliance of company, customer’s identities, including the job of customer are important to measure customer’s risks and customer due diligence. In this case, it was found that a customer still registered as a student while he had been an employee in the fact. The implication of such case was the monthly membership of that customer had to be paid by the company because he was still registered as a student in the period of free-students program.

The missing of company’s professional due care to make session time out and update customer’s identities regularly were other important things because it could give a chance for perpetrator to do irresponsible things.

Study 2

Another case was found in an energy trading company. PT. XYZ, which provides fuel for Oil Company has the process that need to be validated manually so the money which has been received from customer can’t be changed by unauthorized person. The usability of this kind of technology can make fraud by internal companies. This kind of technology needs governance from company, such as the regulation. The process of XYZ [16] was as below,
When the digital product doesn't provide the necessary process, the company should be aware to add the process manually or approved by a supervision. Knowing the high sensitivity of general ledger report in accounting process has made supervision review become more important in this era. There must be a control of input, process and output as regulation stated. That’s why supervisor first before general ledger input should review it. It was because of the fact that accurate application system cannot provide validation process.

The companies have to survive for winning the competition. In this era, our focus are not only about who have responsibility but the accountability also matter. Since the goal of every company is customer satisfaction, some authority has been shifted from staffs to customers. Those customers’s ability has to be maintained regularly.  

It was also supported by one relevant study that resulted in Technology Acceptance Model extension. [8]. By learning from previous studies, this study pointed out that beside the structural assurance and self efficacy for internal and external companies the governance risk compliance also matter to decrease the risk. To add the governance risk compliance aspect, according to author audit experience, author made the TAM extension as below.

### 5. Result of Previous Study

The result from both studies were supported the important of IT GRC for companies.

Study (1) Management has made changes regarding access control to the report format which will be monitored monthly [16]. The IT GRC has made the usage of IT more effective.

<table>
<thead>
<tr>
<th>Number of Users Access Interactive Real Time</th>
<th>Incorrect Total User</th>
<th>Correct Total User</th>
<th>Management Feedback: The differences were the result of different perception, which has just been the attention of management.</th>
</tr>
</thead>
</table>
Figure 5. Feedback

Study (2) Segregation of duties also already made by company, and the procedure has been updated. Accurate application system only can be used by finance division or authorized people.

6. Conclusion & Future Research

This paper added the IT-GRC to reduce the risk for companies that adopt technologies. By Professional due care of IT GRC over information system control through regulate the customer due diligence, monitoring, and access control management could decrease perceived digital risk and increase the effectiveness of technology adoption.

IT-Governance Risk and Compliance (IT GRC) emphasize on the awareness and readiness of the technology acceptance and the following risk of adopting technology. The application of IT-Governance Risk and Compliance include but not limited to technical and non-technical things.

IT-GRC could be a potential key to solve technology acceptance problem to increase companies’ structural assurance in order to decrease digital risk nowadays. Beside technical things (e.g. self-efficacy), companies should also consider the IT-GRC about non-technical things associated to technology acceptance and technology adoption. Professional due care including customer monitoring, customer due diligence and access control management could do IT-GRC regarding non-technical things associated to technology acceptance and technology adoption.
References:


