Internet Adoption Analysis in Small and Medium Enterprises of the Tourism Coastal Areas of East Java (Case Study of Regional District Malang)

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Abstract. This study originated from attraction of researchers about tourism and technology will be the factors which driving the Indonesian economy. One of the potential of Indonesia is a coastal tourist area since Indonesia is an archipelago. Recently the user of technology and information systems are increasingly in many ways. Researchers interests to studying how the progress of use of technology in the tourism sector, so that the outcomes of this research can provide input to the world of education on the design of technologies needed by Small-Medium-Enterprise (SME) specialized in the tourism sector as well as providing information on portrait of SME in the tourism sector, especially in the coastal area of the district of Malang. The plan of this study will be devoted to SME around the beach resort with interviews, questionnaires, direct observations, carried out under the framework Technology-Organization-Environment (T-O-E) according to the study Ghobakhloo, Arias-Aranda, Benitez-Amado, in 2011, Kuan and Chau research in 2001, and Zhu and Kraemer in 2005 that has been developed by researcher from the original research. This research is focused on discussing the adoption factors internet on SME in the beach area of Malang district, especially in the field of technology in the framework of Technology-Organization-Environment. Data processing is done by using Path Analysis supported by SPSS application and AMOS application. Outcomes of this study is expected to be a new discourse in the technological development in the information technology sector as well as inputs for developers of potential coastal tourist areas.

Keywords: Tourism, Small-Medium-Enterprise, Multivariate Analysis, Path Analysis, Technology, Organization, Environment.

I. INTRODUCTION

1.1 Background Study

Indonesia's tourism industry has a lot of potentials. Consisting of thousands of islands and surrounded by sea, with a tropical climate, makes the country itself very prospective for various development, not only nationally but also internationally.

For regions located in the bigger islands and passed by the equator lines, the tourism prospect is usually bigger. Each province would have at least one tourism area, and even then the tourist attractions usually vary, starting from mountain regions, the city, the village, and coastal areas. Even until now there are still plenty areas which are still completely natural and untouched.

In this research, the tourism areas discussed include the coastal areas, since Indonesia's coastal areas are the longest ones in the world. According to Indonesia's Maritime Board Secretary, the length reaches 95,181 km. In addition to this, based on the data from the Geospacial Information Organization, the sum of the length of the coastal areas reach up to 99,903 km from a total of 13,466 islands. This shows the maximum potentials of these areas which are still underdeveloped.

Therefore, the researchers would like to see whether or not the tourism sector, specifically ones close to the observed areas, have taken any significant steps to use any website or CMS (Content Management System) to develop and promote these places. This could be done as long as internet

access is readily available and offered by local entrepreneurs. Hence the researchers are interested to find out the progress of the internet adoption in the tourism industry considering the stark increase in the number of users up to 3,559.5% compared to the year of 2000 in Indonesia.

2. LITERATURE REVIEW
2.1 Technology-Organization-Environment Variables

Based on the previous researches conducted by researchers and published in the National Information System Conference in 2014 (Tileng & Tanamal, 2014), there are 10 variables which are discussed within the T-O-E framework as presented in the table below.

Table 1. *Technology- Organization-Environment Variables Explanation*

Variable (Symbol)	Definition	Reference
Perceived Relative Advantage (PRA)	How trusting companies are towards useful and beneficial internet technology to both the companies and the users.	Sutanonpaiboon & Pearson, 2006
Perceived Compatibility (PCO)	How trusting companies are with the internet technology's consistency towards technological infrastructures, cultures, values, and work implementation used by companies themselves.	Beatty et al., 2001
Perceived Direct Benefit (PDB)	How trusting companies are in direct benefits of the internet technologies in day-to-day operationals	Iacovou et al., 1995
Perceived Indirect Benefit (PIB)	How far companies trust that the internet technology bring benefits to the companies, albeit indirectly, in the long term.	Iacovou et al., 1995
CEO IT Knowledge & Innovativeness (CIK)	The level in which the CEO has the knowledge about IT and any other innovative traits.	Fink, 1998
Financial Commitment (FCO)	The level in which the companies are commited in terms of financial resources in order to provide internet technology within the companies.	Zhu & Kraemer, 2005
Industry Pressure (IPR)	How important it is for companies to think about using pressures to use internet technology either from partners or competitors to strengthen the company's competitiveness.	Grandon & Pearson, 2004, Ramamurthy, Premkumar & 1995
Vendor Support (VSU)	How trusting companies are towards supports from external vendors.	Ghobakhloo et al., 2011, Al-Qirim, 2007
Regulatory Support	How trusting companies are on regulations from the	Zhu & Kraemer, 2005

(RSU)	government in supporting the use of technology.	
Value for SME (VFS)	How trusting companies are in the use of internet technology which brings sales value, efficiency internally, and facilities.	Zhu & Kraemer, 2005

2.2 Small-Medium Enterprises

The Small-Medium Enterprise (SME) in Indonesia is one of the keys of success in the effort of reducing the unemployment rate and improving the economy in the country. SME has contributed a lot in strengthening Indonesia's economy, especially during the economic stagnancy and financial crisis back in 2008-2009. This needs to be supported further in a more organized ways in order to push the country to become one of the 10 world's economy giants by 2025 according to the reports published by OECD in 2012. Therefore, studies on SME are viewed as significant, both for scholars or for business practitioners in Indonesia. The adoption of information technology in the SME is a research subject which would need a solid theoretical basis and would help strengthen the conceptual and empirical foundation.

3. RESEARCH METHOD

3.1 Introduction

This chapter would elaborate further on the statement of the problem, the background literature on Technology-Organization-Environment, hypothesis formulation, data, population and sample collections for the research, research instrument developments, as well as the method.

3.2 Hypothesis Formulation

The TAM model on Figure 3.1 is the one used by researchers and it has been modified according to each case study observed. The lines linking the variables show correlation between variables. Those correlations then become the new hypothesis studied by researchers. Hypothesis studied by researchers could be seen on Table 2.

Table 2. Research Hypothesis

		Context
H1	*Perceived Relative Advantage* is directly related, both significantly & positively, to *Perceived Direct Benefit*	*Technological Context*
H2	*Perceived Compability* is directly related, both significantly & positively, to *Perceived Direct Benefit*	
	Perceived Direct Benefit is directly related, both significantly & positively, to *Value for SME*	
H3	*Perceived Indirect Benefit* is directly related, both significantly & positively, to *Value for SME*	
H5	*CEO IT Knowledge & Innovativeness* is directly related, both significantly & positively, to *Value for SME*	*Organizational Context*
H6	*Financial Commitment* is directly related, both significantly & positively, to *Value for SME*	

H7	*Industry Pressure* is directly related, both significantly & positively, to *Value for SME*	
H8	*Vendor Support* is directly related, both significantly & positively, to *Value for SME*	*Environmental Context*
	Regulatory Support is directly related, both significantly & positively, to *Value for SME*.	

3.3 Data Collection

Researchers would use observation and interviews for the research. Questionnaires with a list of questions that should be answered would be distributed to those qualified to the criteria set by researchers. For this purpose, researchers would use the Likert scale to measure the answers using this measurements:
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree

3.4 Data Processing

To process the data, the SPSS software would be used to check for validity, reliability, normality, and correlation tests. After this, for the new model, the software AMOS would be used. In addition to these, a qualitative method would also be used to consider all feedbacks given.

3.5 Track Analysis

The figure below depicts the mapping of the analysis result.
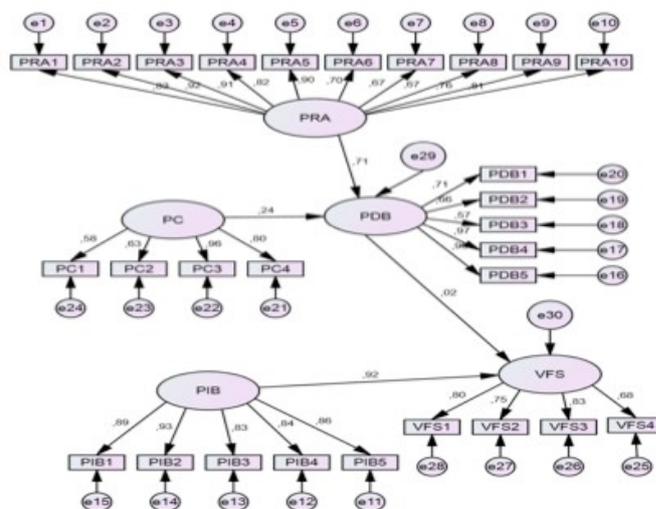
4. CONCLUSION

4.1   Conclusion
1. All variables that are within the PRA has been associated with the PRA variable.
2. All variables that are within the PC has been associated with the PC variable.
3. All variables that are within the PIB has been associated with the PIB variable.
4. All variables that are within the PDB has been associated with the PDB variable.

5. All variables that are within the PRA has been associated with the PRA variable.

6. Perceived Direct Benefit is not significant related to Value for SME according this research to SME of Coastal Areas in Malang region.

7. Perceived Indirect Benefit is significant related to Value for SME according this research to SME of Coastal Areas in Malang region. SME still not have intention to use the internet just because the sophistication of technology.

8. The government needs to encourage the introduction of internet program in coastal areas of Malang.

4.2 Next Research

Further studies will investigate the factors over the internet causes underdeveloped in the area of SMEs Malang.

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