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A Literature Review of in IS Adoption Model Factors

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ABSTRACT

The propose of this research is to review the IS adoption model that can be applied to Enterprise 2.0 such as including social networks, virtual community (group discussion), cyber meetings, online chat, enterprise social software, social commerce, Customer Relationship Management (CRM) and project management. The systematic literature review (SLR) method used in this research is proposed by Kitchenham in 2004. This research reviewed 257 research papers and then selection process used the inclusion criteria based on the title and abstract, and it selected 47 paper. In the selection process used inclusion criteria for full text and it produced 19 paper. Then in the final stage or the 3rd stage, the selection used exclusion criteria and produce 15 papers. As conclusions, IS adoption model adopt some theories such as TOE framework, TAM, UTAUT, TOS, diffusion innovation theory and social capital theory. Some factors that affect the adoption of this model are technology, organization, environment, competency, personal and others.

Keywords: IS Adoption Model, Systematic Literature Review, Model Factors

I. INTRODUCTION

Many research paper have been done in finding IS adoption model in the use of Enterprise 2.0 case studies in various companies in the world. Those studies aim to contribute the IS adoption model that can be applied to Enterprise 2.0 such as including social networks, virtual community (group discussion), cyber meetings, online chat, enterprise social software, social commerce, Customer Relationship Management (CRM) and project management (Pratama, Meiyanti, Noprisson, Ramadhan, & Hidayanto, 2017; Sucahyo, Rotinsulu, Hidayanto, Fitrianah, & Phusavat, 2017).

Those various studies are conducted by collecting a variety of research in the IS adoption models with 257 primary studies that were selected by the various stages to produce 18 final papers. Many studies in the IS models using approaches like TOE (Technology-Organization-Environment). Based on background above, this literature review aims to answer some research questions about IS adoption model applied to enterprise 2.0.

II. LITERATURE REVIEW

The previous research topic of IS is trying to find a theory in explaining of the determinants factors of adopting IT (Liao, Palvia, & Chen, 2009). Many studies have conducted an investigation of the factors that affect the sustainability of innovation IS within the organization (Liao et al., 2009). Some models were developed to support Information Systems adoption such as TAM, ECM, and CSD. Since published by Davis, TAM has been dominating in the use of the IS adoption model. It focuses on the acceptance factors of the information system that is affected by behavioral intention to use and user attitude (Davis, 1985). In

2001, Bhattacherjee proposed a model with the behavioral approach in the adoption of information systems known as ECM (Expectation Confirmation Model), which argues that user satisfaction is an important factor in the sustainability of a system (Bhattacherjee, 2012).

III. METHODS AND MATERIAL

A. Methodology

The systematic literature review (SLR) method used in this research is proposed by Kitchenham in 2004. According to the research paper, a systematic literature review is a systematic process to identify, evaluate and interpret all sources of research related to the research question or research topic (Kitchenham, 2004). Several stages of the systematic literature review were used in this study consists of three parts, including planning, implementation, and reporting, with the detail of each stage can be seen in Fig 1.

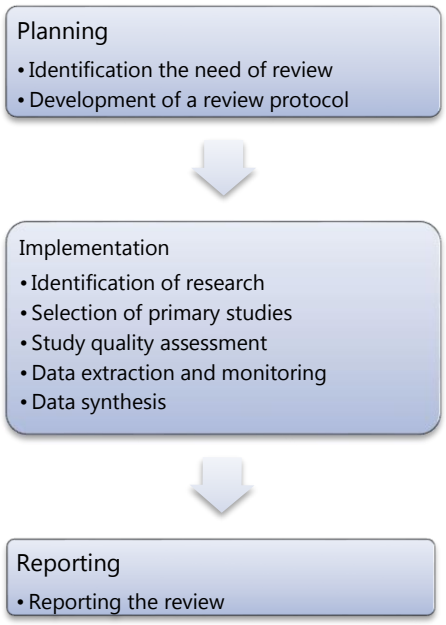


Figure 1. Stages of SLR using Kitchenham method

B. Data Collection

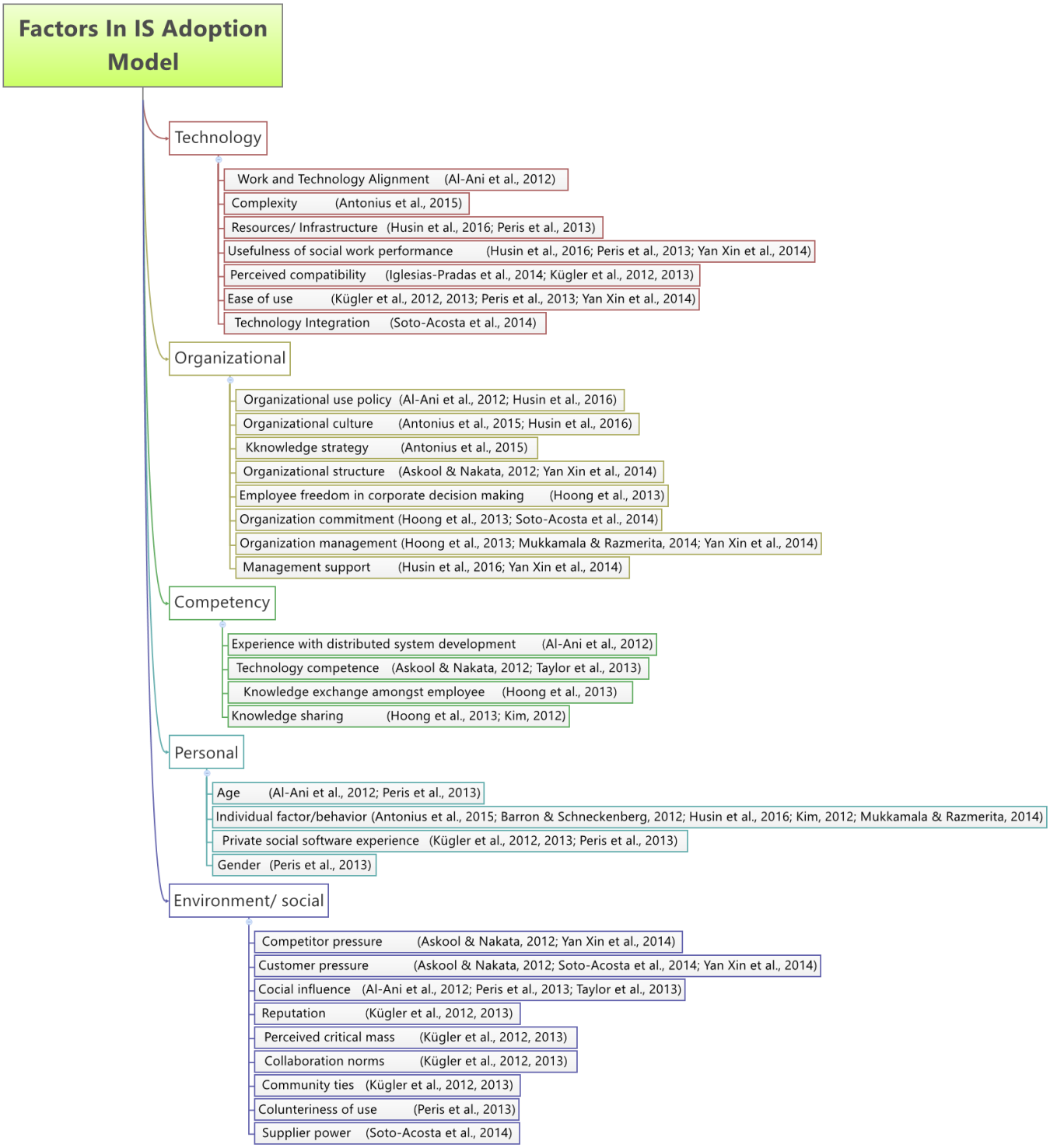
This research reviewed 257 research papers and then selection process used the inclusion criteria based on the title and abstract, and it selected 47 paper. In the selection process used inclusion criteria for full text and it produced 19 paper. Then in the final stage or the 3rd stage, the selection used exclusion criteria and produce 15 paper which is classified as below.

Topic	Reference
Work and Technology Alignment	(Al-Ani, Wang, Marczak, Trainer, & Redmiles, 2012)
Complexity	(Antonius, Xu, & Gao, 2015)
Resources/ Infrastructure	(Husin, Evans, & Deegan, 2016; Peris, Blinn, Nüttgens, Lindermann, & Von Kortzfleisch, 2013)
Usefulness of social work performance	(Husin et al., 2016; Peris et al., 2013; Yan Xin, Ramayah, Soto-Acosta, Popa, & Ai Ping, 2014)
Perceived compatibility	(Iglesias-Pradas, Hernández-García, & Fernández-Cardador, 2014; Kügler, Smolnik, & Raeth, 2012, 2013)
Ease of use	(Kügler et al., 2012, 2013; Peris et al., 2013; Yan Xin et al., 2014)
Technology Integration	(Soto-Acosta, Perez-Gonzalez, & Popa, 2014)
Organizational use policy	(Al-Ani et al., 2012; Husin et al., 2016)
Organizational culture	(Antonius et al., 2015; Husin et al., 2016)
Kknowledge strategy	(Antonius et al., 2015)
Organizational structure	(Askool & Nakata, 2012; Yan Xin et al., 2014)
Employee freedom in corporate decision making	(Hoong, Lim, & Aripin, 2013)
Organization commitment	(Hoong et al., 2013; Soto-Acosta et al., 2014)

Topic	Reference
Organization management	(Hoong et al., 2013; Mukkamala & Razmerita, 2014; Yan Xin et al., 2014)
Management support	(Husin et al., 2016; Yan Xin et al., 2014)
Experience with distributed system development	(Al-Ani et al., 2012)
Technology competence	(Askool & Nakata, 2012; Taylor, Wang, Jung, Kang, & Chung, 2013)
Knowledge exchange amongst employee	(Hoong et al., 2013)
Knowledge sharing	(Hoong et al., 2013; Kim, 2012)
Age	(Al-Ani et al., 2012; Peris et al., 2013)
Individual factor/behavior	(Antonius et al., 2015; Barron & Schneckenberg, 2012; Husin et al., 2016; Kim, 2012; Mukkamala & Razmerita, 2014)
Private social software experience	(Kügler et al., 2012, 2013; Peris et al., 2013)
Gender	(Peris et al., 2013)
Usage of other technology	(Al-Ani et al., 2012)
Power distance	(Barron & Schneckenberg, 2012)
Uncertainty avoidance	(Barron & Schneckenberg, 2012)
Curiosity of new technology	(Barron & Schneckenberg, 2012)
Relationships between ties in a social network	(Hoong et al., 2013)
Group supportability	(Iglesias-Pradas et al., 2014)
Used as communication channel	(Kim, 2012)
Relative advantage	(Kügler et al., 2012, 2013)
Result demonstrability	(Kügler et al., 2012, 2013)
Trust	(Kügler et al., 2012, 2013)
IT expert	(Peris et al., 2013)
Government support	(Yan Xin et al., 2014)
Competitor pressure	(Askool & Nakata, 2012; Yan Xin et al., 2014)
Customer pressure	(Askool & Nakata, 2012; Soto-Acosta et al., 2014; Yan Xin et al., 2014)
Cocial influence	(Al-Ani et al., 2012; Peris et al., 2013; Taylor et al., 2013)
Reputation	(Kügler et al., 2012, 2013)
Perceived critical mass	(Kügler et al., 2012, 2013)
Collaboration norms	(Kügler et al., 2012, 2013)
Community ties	(Kügler et al., 2012, 2013)
Colunteriness of use	(Peris et al., 2013)
Supplier power	(Soto-Acosta et al., 2014)

IV. RESULTS AND DISCUSSION

The systematic literature review helps us to find the factors in IS adoption model applied to Enterprise 2.0. Tabel XIV shows that several factors that affect IS adoption model, such as technology, organizational, environment/social, personal, competence and others. Those factors are grouped by several theories such as TOE (Technology, Organizational, Environment), UTAUT (The unified Theory of Acceptence and Use of Technology), TOS (Technology, Organizational, and Social), and also technology, management and people perspectives.



From the figure above, the most common factors in IS adoption model are individual behavior and ease of use. These variables influence the personal and technology factor of enterprise 2.0 adoption model. In the adoption of enterprise 2.0, these factors must be highlighted as the strongest factors that contribute in many adoption models.

Table below shows that the most research model approach use TOE (Technology, Organizational, Environment) and UTAUT (The Unified Theory of Acceptance and Use of Technology).

TABLE 1. RESEARCH MODEL APPROACH

Research Model Approach	Reference
TOE (technology, organization, environment) Framework	(Askool & Nakata, 2012; Soto-Acosta et al., 2014; Yan Xin et al., 2014)
Theory of use and non use	(Al-Ani et al., 2012)
TAM (Technology Acceptance Model)	(Antonius et al., 2015)
The role of an affect	(Hoong et al., 2013)
Technology, management, and people perspective	(Husin et al., 2016)
Socially drived characteristic	(Iglesias-Pradas et al., 2014)
Major characteristics of social software	(Kim, 2012)
TOS (Technology, Organization, Social)	(Kügler et al., 2013)
Innovation diffusion theory and social capital theory	(Kügler et al., 2012)
Cultural and social dilemma	(Mukkamala & Razmerita, 2014)
UTAUT (The Unified Theory of Acceptance and Use of Technology)	(Peris et al., 2013; Taylor et al., 2013)

V. CONCLUSION

Systematic literature review helps to extract the data from the wide area. It can be seen from the result from various research methods, research samples, and respondent countries. It shows that the literature review helped in collecting data and information related to Enterprise 2.0 from many studies. In general, IS adoption model adopt some theories such as TOE framework, TAM, UTAUT, TOS, diffusion innovation theory and social capital theory. Some factors that affect the adoption of this model are technology, organization, environment, competency, personal and others.

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