The Critical Success Factors Study for e-Government Implementation

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ABSTRACT
The high failure of e-Government is a motivation to do the research about Success Factors of e-Government implementation. Studying CSFs is an important issue that helps to implement e-Government successfully and to avoid failure. There have been various Success Factors of e-Government implementation obtained from CSFs Studies by other researcher but gives no overall big picture. In this paper, author wants to synthesize some studies to get a generic model of Success Factor for e-Government implementation. The method used in this study is Meta-Ethnography for synthesizing qualitative findings about 94 studies and 571 CSFs concepts. The result from the study is 55 Synthesized Success factors that Government organization and all parties must pay attention to ones for successful e-Government implementation**.**

Keywords
E-Government, Failure, Critical Success Factor, Meta-Ethnography, Synthesize.

1. INTRODUCTION
One of the most important emerging applications of Information and Communication Technology (ICT) is e-Government [1]. E-Government is global phenomenon occurring in developed and developing countries. The concept of e-Government has begun to spread among countries [9] while the implementation of e-Government has become main goals of many countries around the worlds nowadays. E-Government holds enormous potential in terms of improving service delivery and efficiency, better response to business and citizens needs and provision of affordable government services [3]. There are many definitions about e-Government but no single agreed definition [111]. The United Nations defined e-Government as the use of Information and Communication Technology (ICT) and its application by the government for the provision of information and public services to the people [124]. According to World Bank Website (2009), e-Government is defined as the use by government agencies of Information Technology (such as WAN, internet, mobile computing) that have the ability to transform relations with citizens, business, and other arms of government. Some author as researcher added e-Government definition with purpose to support good governance in the government organization such as Jeffry (2008) noted e-Government refer to the continuous innovations in the delivery of services, citizen participation, and governance through the transformation of external and internal relationships by the use of information technology, especially the internet. Vassilakis & Lepouras (2007) said that e-Government is the use of information and communication technologies in government for at least three purposes : (1) Providing public services, (2) Improving managerial effectiveness, and (3) Promoting democracy.

Heeks (2006) through "Implementing and Managing e-Government" said that e-Government is the use of Information and Communication Technology (ICT) by public sector organizations [55]. According to Heeks, e-Government is an information system but different from ordinary information system that is targeting the private sector which financial income become its orientation. An e-Government is a complex socio-technical system [55] [9], then e-Government is not only about technology but also organizational, social and economic issues [131] Heeks (2006) has also summarized eight dimensions of e-Government adoption called ITPOSMOO (Information, Technology, Processes, Objective and Values, Staffing and Skills, Management System and Structures, Other Resources : time and money, Other World) which major dimensions of e-Government is non-technology issues. However, e-Government implementation is not straightforward. E-Government is not simply introducing web-based technologies to government, but it is also considered as a complicated social system which covers main social issues [43].

Nowadays Governments around the world are racing to implement the e-Government concept in their countries, but some of them have suffered failure in adopting e-Government concept [46]. According to Heeks (2004), most of e-Government project in developing countries have failed, 35%of e-Government project are total failures, 50% are partial failures and only 15% are success [54]. In addition, Gartner (2002) reported that more than 60% of e-Government initiatives have failed or below from expextation. Survey from UNDESA (2003) also said same fact of e-Government failure rate which is 60-80% in developing countries [125]. Therefore, in this paper author proposes success factor of e-Government to avoid failure during implementation. Based on Wood-Harper et al (2004), declare that studying the factors involved in e-Government delivery is an important issue [132]. Altameem et al (2006) also said that exploring the critical factors for e-Government implementation helps to implement the e-Government project successfully avoiding the probability of failure, which can lead to undesirable consequences [12]. Defining critical success factors (CSFs) of e-Government implementation will help the country avoid e-Government project failure [10]. In accordance with multidisciplinary nature of e-Government (Assar et al., 2011), the success factors are not only related to ICT where some success factors can be derived from social sience, economics, politics, etc [18].

2. CRITICAL SUCCESS FACTORS
CSFs (Critical Success Factors) define the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual , department or organization. CSFs are the few key areas where things must go right for the business to flourish and for the manager's

goals to be attained [26]. Thus, any activity or initiative that the organization undertakes must ensure consistently high performance in these key areas; otherwise, the organization may not be able to achieve its goals and consequently may fail to accomplish its mission. In other words, CSFs could make the difference between success and failure for organization.

The concept of CSF is not really a revolutionary new field of work. It dates back to the original concept of success factor put forth in management literature by D. Ronald Daniel in the 1960's, helping managers to determine their information needs and as a inter-discipline approaches which useful for evaluation [33]. Then the explosion of information made organizations hard to use significant amount of information for analysis and decision making. John F. Rockhart, of MIT's Sloan School of Management popularize the concept of CSF when many senior executives still lacked the information essential to make the kinds of decisions necessary to manage the enterprise [100]. Rockhart concentrated on developing approach to help organizations especially executives clearly identify and define their information needs.

Rockhart expanded on the work of Daniel to develop the CSF approach and suggested that, to be effective in avoiding information overload, an organization's information system must focus on factors that determine organizational success [102]. Using success factor as a filter, managers could then identify the information that was most important to making critical enterprise decisions. Unfortunately, managers implicitly know and consider CSFs when they set goals and as they direct operational activities and tasks that are important to achieving goals. However, when CSFs are made explicit, they provide a common point of reference for the entire organization. Then they can be used to aid in the company's planning process, to enhance communication among the firm's management, and to aid information system development [26].

CSFs are not a standard set of measures for organization-wide but CSFs are specific because of the unique circumstances associated to particular industry, company and at a particular point of time. According to Rockhart (1981), there are five prime sources of CFSs that should be research : 1.The industry in which the organization competes, 2.Competitive strategy and Industry Position, 3.The general business climate or organizational environment, 4.Problems, barriers, or challenges to organization (Temporal Factors) and 5.Layers of Management (Managerial Position).

To provide an accurate picture of an organization's overall key performance areas, it is important to identify CSFs from each of these sources. Rockhart (1982) in next research about "The changing role of Information System Executive : A Critical Success Factor Perpective" explained CSFs of Information System (IS) for nine companies in the same and different industry with different size/scale [103]. He said that although the CSFs are different from company to company, they converge to a set of four distinct CSF as a model (generic) in industry wide : 1.Service (Actual and Perception), 2. Communication (Top management and Key users), 3. Human Resources (Quality, Incentive and Retention) and 4. Repositioning of IS (End user computing, Involvement in main area product line, Inclusion of telecommunications, Single information function and Staff Organizational Structure). Based on above explanation, CSFs concept and approach are still powerful today and applicable to many of the challenges in Information System (IS) including e-Government, since e-Government is an Information System [51]. Elmeziane et al (2011) emphasize the need for CSF in Information System projects [41]. CSFs are also considered as factors those occurrences whose presence or absence determine the success of ICT project [49]. Therefore, in this paper author propose CSFs of e-Government implementation to avoid failure.

3. LITERATUR REVIEW

The high failure of e-Government implementation is a driver that motivated to do the research about the factors that influence e-Government implementation success [12]. This explain that why the study of CSF in e-Government implementation is still done until today (Ramadhan et al, 2013; Chen, 2012 ; Nograsek, 2011; Hossain et al., 2011; Shivraj & Vikas, 2011; Apostolou, 2011; AL-Kaabi, 2010; Angelopoulos et al., 2010; AL-Azri, 2010 and so forth). As a result, there are various CSFs of e-Government implementation that has been successfully identified by other researchers.

However, all of those success factor are belongs to researcher and provide no coherent overall picture. For example, Altameem (2006) have identified 13 CSFs that are associated with e-Government implementation [12]. Fortune & White (2006) formulated 27 CSFs related to e-Government initiatives [44]. On the other hand, Ebbers Van Dick (2007) summaried 10 CSFs also related to e-Government implementation [39]. If the three CSFs studies above compared, there are some CSFs will remind the same meaning between the studies. For instance, in the research of Altameem (2006), there is CSF named "Top Management Support", and in the research of Fortune & White (2006), there is CSF named "Support from Senior Manager", but in the research of Ebbers Van Dick (2007) there is CSF named "Presence of Top Management Involvement". Eventhough, each of CSF has different name but they have the same meaning, that is the need of "Top Management Support" in e-Government implementation. Besides that in those journal articles, there are still some other CSFs which has different name but have the same meaning. For example, there is CSF named "Change Management" in the research of Altameem (2006), and there is CSF named "Effective Change Management" in the research of Fortune & White (2006), and there is CSF named "Presence of Adaptation of Organizational Structure" in the research of Ebbers Van Dick (2007). The three of CSFs has different name one another but essentially have the same meaning, that is the need of "Good Change Management" in e-Government for success implementation. Since the concept of CSFs of those journals above truly have the same meaning, so synthesizing these three journals could obtain the general success factor from them. The above example is only of these three journal articles with associated to e-Government implementation while there are also many other conference papers or journal articles that propose CSFs for e-Government implementation.

In this paper, about 94 full text articles was studied related to CSFs studies of e-Government implementation through conference papers and journal articles which is not only taken from reputable database such as CiteSeer^x/Sience Direct/Scopus (journal articles) and IEEE Explorer/ACM (conference papers) but also other conference papers/journal such as Ali (2013) proposed 10 CFSs that highly influence e-Government implementation in Jordan [8], Chen (2009) found 5 CSFs related with e-Government application in Guangdong China [7], Wahed (2013) identify some CSFs of e-Government in Egypt [128]. On the other hand, Rokhman (2011) [104], Furuholt & Wahid (2008) [45], Sutanta (2012) also proposed some CSFs related to e-Government initiative

in Indonesia [117], and so forth. The reason reviewing and synthesizing various conference papers and journal articles of CSFs studies is there's a need to identify and analyze Success Factors from various cases and lesson learned about CFSs of e-Government implementation so greater explanatory of those CSFs studies can be obtained.

Currently, there are a number of different methods that have been proposed for the synthesis of qualitative findings based on approaches used in primary research, they are Meta-ethnography, Thematic analysis, Grounded Theory, Content analysis, Narrative synthesis and so forth. Finlayson & Dixon (2008) identify four methods for synthesizing qualitative research (meta-ethnography, grounded formal theory, cross-case analysis and meta-study) whereas others identify nine [22]. Since Meta-ethnography is the most well developed method for synthesizing qualitative data and one that clearly has origins in the interpretive paradigm from which most methods of primary research evolved [25]. Meta-Ethnography is a useful method for synthesising qualitative research and for developing models that interpret findings across multiple studies [19]. In this paper, Meta-Ethnography will be used for synthesizing CSFs for e-Government implementation. However, until now there has been no study that uses Meta-Ethnography in formulating success factor in e-Government initiatives [97].

4. RESEARCH METHODOLOGY

The research methodology that will be used in this study is Meta-Ethnography. Noblit and Hare's method of Meta-Ethnography was published in 1988 and is described an attempt to develop an inductive and interpretive form of knowledge synthesis [92]. This educational synthesis took an aggregative, thematic approach that involved abstracting data and isolating factors in each study that appeared to be responsible for the failure of schools to desegregate. This process of abstraction de-emphasized the uniqueness of each site. The context therefore merely became a confounding variable in the search for common findings rather than contributing to an explanation of these findings. As a result, the synthesis did not provide researchers or policy-makers with an understanding of what went wrong and what could be done about it. Noblit and Hare aimed to overcome these limitations through developing a distinct method for the synthesis of qualitative studies that was informed by Turner's theory of the social explanation and is interpretive rather than aggregative [92].

This aim of constructing adequate interpretive explanations required developing a way of reducing and deriving understanding from multiple cases, accounts, narratives or studies while retaining the sense of the account. Noblit and Hare were themselves ethnographers who were concerned with long-term intensive studies that employed observation, interviews and documents, and termed the approach that they developed Meta-ethnography. However, they described Meta-Ethnography as being applicable to qualitative research generally and as forming a rigorous procedure for deriving substantive interpretations about any set of ethnographic or interpretive studies. Noblit and Hare also noted that their particular approach was a meta-ethnography and that it formed but one of many possible approaches.

Noblit and Hare identified seven phases as seen Figure 1 in undertaking Meta-Ethnography, but observed that in practice these phases may occur in parallel and overlap. The phases broadly correspond with other methods of synthesis, but differ in the assumptions and procedures involved. One difference is that the sample for research is purposively selected in relation to the topic of interest rather than being exhaustive. This reflects the general approach of qualitative methods and the aim of achieving interpretive explanation. A second difference is that the interpretations and explanations contained in the original studies are treated as data through the selection and analysis of key 'metaphors' (i.e. the concepts revealed by qualitative studies), with the aim of reducing accounts while preserving the sense of the account.

7 Steps of Noblit and Hare's Meta-Ethnography

1. **Getting Started** - Identifying interest or focus of study in qualitative research.
2. **Deciding what is relevant to the initial interest** – Searching for literature from relevant journal or conference papers
3. **Reading the studies -** Repeated reading of literature and finding metaphors.
4. **Determining how the studies are related –** Putting together and find type of relationship.
5. **Translating the studies into one another –** Comparing concept or methaphor one another.
6. **Synthesizing translation -** Determining if there are types of translation are able to encompass others
7. **Expressing the synthesis -** Naming for the proposed synthesis result

Fig 1. Seven Step Meta-Ethnography [adapted from Campbell, 2011]

Preparation for comparison between studies requires listing and juxtaposing the key metaphors, phases, ideas and/or concepts used in each account but retaining, as far as possible, the terminology used by the authors to remain faithful to the original meanings. A third difference is that comparison between studies involves processes of 'translation', with the metaphors/concepts and their interrelationships in one account being compared with those in another account. This process of translation is idiomatic and focuses on translating the meaning of the text rather than a literal translation, with the aim of preserving original meanings and contextualization.

Noblit and Hare identified three possible types of relationship that guide translation and subsequent synthesis [97] :

- Reciprocal translation : This assumption applies when the accounts (concepts) of the studies are directly comparable and similar [92] [40].
- Refutational translation : That is where accounts may conflict (Edwards et al., 2009). They stand in relative opposition to each other . [40]
- Line of argument : This assumption applies when the accounts of the studies are: not directly comparable, doesn't opposite each other and about so different topics (Noblit and Hare, 1988). A lines-of-argument synthesis is essentially about inference: "What the whole can say (organization, culture, etc.), based on selective studies of the parts?" Once the initial strategy yields a tentative assumption about the relationships between the studies, the next strategy is to construct translations based on this assumption [92].

How translations are synthesized, and the product of this process, depends on how studies relate to each other. Both translation and synthesis involve a continuous comparative

analysis of texts until a comprehensive understanding of the phenomena is realized and the synthesis is then complete.

The final stage of Meta-Ethnography is expressing the synthesis or communicating with an audience. This was given considerable emphasis by Noblit and Hare, who stated that the worth of any synthesis is in its comprehensibility to some audience. They described the needs of the audience as influencing both the form and substance of the synthesis. Some understanding of the audience's culture is therefore required to ensure that the translation of studies for the synthesis uses intelligible concepts to inform the final presentation of synthesis. They observed that if the data are inadequate or if the audience can't see the connection between data and the argument then the study becomes unbelievable.

5. RESULT AND DISCUSSION

Getting Started : The main topic in this research paper is to identify and synthesize Success Factor from several related studies that is drawn from various journal articles and conference papers. The result of activities done in this paper is to obtain a model (generic) Success Factor associated to e-Government implementation.

Deciding what is relevant to the initial interest : The studies which relevant to this research interest is only associated to CSFs Studies of e-Government implementation. As discussed in Literature review that in this paper, all full text articles were already reviewed which is drawn from various journal articles and conference papers. Initially, conducting text searching on the topic was done, using the keyword such as: "e-Government", "Critical Success Factor" and "Success Factor". Then the result about 230 articles (journal and conference papers) came from the searching process. After literature screening by their title & abstract, the criteria of studies must be related significantly to CSFs of e-Government implementation. As a result, in total about 94 full text articles/studies where 46 studies/articles taken form Ramadhan et al research [97] which are retrieved from Science Direct/Scopus for journal and IEEE Xplore for conference papers. Total 94 studies consist of 48 journal and 46 conference papers. The studies that resulted from literature screening are then used in the next step.

Reading the studies : The interpretative metaphors in this literature are in the form of concept, that is CSFs (Critical Success Factors) concept. In this process, all about 94 articles have been studied and red repeatedly. All articles was traced carefully. Some concepts related to CSFs of e-Government implementation are noted. There are 571 concepts (CSFs concepts) obtained from about 94 articles. In addition, marking the reasons or explanations of each studies about why their concept can be considered as success factor for e-Government implementation was needed.

Determining how the studies are related : In doing a synthesis as said, the various studies must be put together and requires determining the relationships between the studies to be synthesized (Noblit and Hare, 1988). Therefore, in this step some comparations was done among the concepts across multiple studies. In this process, the reasons or explanations of each studies was used to understand the relationship among their studies. In this phase, a lot of their concept are relatively similar so that all of the studies are related in reciprocal translation.

Translating the studies into one another & Synthesizing translations: In Meta-ethnography, the translating and synthesizing was done simultaneously (Noblit and Hare, 1988). Translating process here as said is the process of taking concepts from one study and recognizing the same concepts in another study even though they have different concept name. Synthesis refers to making a whole into something more than the parts alone imply. By synthesizing, a common concept that encompass those of other concepts was brought. In this step, he reasons or explanations (third step) of each studies about their success factor is still used. Synthesizing process in this paper as defined above, also include 46 studies and 36 synthesized success factors resulted from Ramadhan research [97]. As the final result, 55 new CSFs concept from synthesizing process obtained.

Expressing the synthesis : This study is an expression of the synthesis. Every success factors in Table 1 are supported by some of the concepts within and across the studies. All of the success factor that depicted in Table 1, have the same degree. No one is more important and less important, all of them are equal.

Table 1. Critical Success Factors for e-Government Implementation

No	Critical Success Factor
1	User and Stakeholder involvement
2	Good Planning
3	Using Portal/Application
4	Training
5	Good system usability
6	System campaign
7	Prototype
8	Good team skills and expertise
9	Strong Leadership
10	Good coordination between all project participants
11	Best practice consideration
12	Enough Funding
13	Make Better business process
14	Supportive government policy
15	Political support and stability
16	Good oursourcing strategy
17	Supportive ICT Infrastructure/service availability
18	User/citizen computer/internet literacy
19	Good and clear organizational structure
20	International support
21	System security
22	Legal framework
23	Monitoring and evaluation
24	Good partnership with other institution
25	Good change management
26	Supportive cultural environment
27	Good system modeling
28	Deal with bureaucratic processes
29	Citizen relationship management
30	Top management support
31	Support interoperability
32	Good project management
33	Good information quality
34	Good system quality
35	Good service quality
36	Trust
37	Awareness
38	Good Governance
39	Citizen Satisfaction
40	System Development Methodology
41	Electronic Transaction

42	User/Premium Fees
43	Gradual Implementation
44	Re-Usable
45	Continuous Improvement
46	Creativity & Innovation
47	Willing to Change
48	Reward & Recognition
49	Highly Demand of Citizen
50	Self-Sustanaible Revenue
51	E-Participation
52	Prioritization of e-Government
53	Market Sinergy & Potential
54	External Pressure
55	Guidelines for e-Government Development

6. CONCLUSIONS

The purpose of this research to identify and synthesis Critical Success Factor of e-Government implementation is done. There are 55 Crititcal Success Factors as a result from this paper that gives major contribution about what key area that should be accommodated to ensure successfull implementation of e-Government and to avoid failure. The Synthesized Success Factors can be used to assist to help Government Organization in its IS (Information System) planning process too. This study also has successfully used Meta-Ethnography Method for synthesizing qualitative findings in area of Information System especially e-Government. This is the other contribution because Meta-Ethnography Method can be used in other e-Government research or future research especially with qualitative findings.

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