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Propose of Critical Success Factors for e-Hajj Implementation in Indonesia

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Abstract: Failures in many e-Governments implementation in various countries including in Indonesia are caused by various factors. So that, it is necessary to identify the factors that can determine the level of success of e-Government in the country. This study intends to propose factors that can determine the success rate of implementation of e-Hajj in Indonesia as one of e-Government implementation. We use top-down approach to identify Critical Success Factors (CSF) as the methodology that consist of four phases. First, we use ITPOSMO to investigate the existing models. Second, we collect key success factors from literatures in preparation process. Third, we merge all of the finding key success factors by mapping them to ITPOSMO model. Fourth, in data analysis process, we analyze those factors based on their appropriate elements in IT POSMO for e-Hajj implementation CSF. As a results, we propose 82 factors as the CSF for e-Hajj implementation in Indonesia that categorized into 6 elements in ITPOSMO.

Key words: e-Government, e-Hajj in Indonesia, e-Hajj model, CSF for e-Hajj, IT POSMO

INTRODUCTION

e-Government has been widely implemented in several countries including Indonesia but some of them are failure in implementation process. There are many obstacles and factors that caused failures in the process of implementing them such as management, infrastructure and human factor itself. This is supported by statements from (Elkadi, 2013), e-Government implementation in developing countries still face difficulties, leading to a large ration failure. This causes high cost for developing countries like Indonesia. So that, it is necessary to identify Critical Success Factors (CSF) for e-Government implementation. This also applies to e-Hajj as one of e-Government implementation.

Indonesia already has a delivery system hajj called SISKOHAT (Sistem Informasi Komputerisasi Haji Terpadu) but the implementation is not optimal and has not been evaluated (Munir, 2013; Nijam and Hanan, 2006). SISKOHAT must comply to Arab Saudi hajj delivery system which made Indonesian e-Hajj concept became mandatory. In order to implement e-Hajj there should be included in-depth study in identifying success factors for e-Hajj implementation, especially in Indonesia.

Currently, there is no specific study on CSF (Critical Success Factors) for e-Hajj but there were some researchers who discuss the CSF for e-Government implementation (Napitupulu, 2015; Azri *et al*., 2010). Since, the concept of e-Hajj as similar to the concept of e-Government, identifying CSF for e-Hajj, we can refer to research on the CSF for e-Government implementation.

Some researchers used IT POSMO to achieve key success factors. This method has been used by Elkadi (2013), Hwang and Syamsuddin (2008). Thus, this research tries to map key success factor using IT POSMO Model which will be proposed as CSF for e-Hajj implementation in Indonesia.

Literature review

CSF (Critical Success Factor): Critical Success Factor (CSF) in Ward and Peppard (2009) was defined as "the limited number of areas in the which results, if they are satisfactory will the Ensure successful competitive performance for the organization. They are the few key areas where things must go right for the business to flourish. If results In These areas are not adequate, the organization's Efforts for the period will be less than desired. According to research by Atkinson (1999) success is divided into two categories which can be used for goals measurements of organization as "doing it right" and "getting it right".

CSF also has parts to ensure of satisfactory and successfull result of competitive performance, either individual, department or organizational (Huang and Lai, 2012; Alazmi and Zairi, 2003). CSF also ensures success

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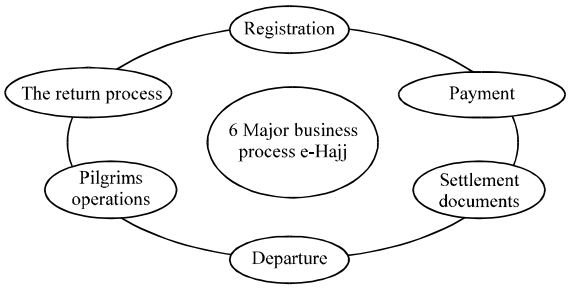

Fig. 1: Major business process in Hajj

continuation of organization which have to be given special attention by the organization (Ranjan and Bhatnagar, 2008). Thus, from those definitions we conclude that CSF need to be addressed to ensure performance and continuation of organization.

Hajj in Indonesia: Hajj is a religious ritual for Muslims around the worlds. It is part of the five pillars of Islam and an obligation once in a lifetime for those who could capable both in physical and financial because it is not easy to do Ali Imran (Azri *et al*., 2010). Physical ability is capabilities to visit the House (Ka'bah) to do some practice, specifically, tawaf, sa'i and other practices (Nijam and Hanan, 2006).

Saudi Arabia, Bangladesh, Malaysia and Singapore have been developed e-Hajj system. These countries are already implementing technology-based model of the organization of the Hajj but there is no studies that specifically discusses the factors of successful implementations of e-Hajj.

e-Hajj model in Indonesia which will be developed included various mechanisms. The scope of the coordination of agencies and institutions are very spacious, both government and private institutions in the country and abroad are very varied in accordance with its duties and functions. There are some aspects which required to be prepared in the management of Hajj including guidance for pilgrims, transportation, health, accommodation and security. This various problems led to the organization of Hajj. This is a duty as well as a national program in accordance to Act No. 13 2008 about hajj management which converted into Act No. 34 of 2009 about hajj. Therefore, this task must be completed on a national level with the coordination of agencies and ministries horizontally and vertically which will be delegated to the regions.

We identify 6 major business processes in the organization of the Hajj in Indonesia based on those regulation, namely: registration, settlement, settlement documents, departure, pilgrims' operations and the return process as described in Fig. 1.

Management model of the pilgrimage: Computerized Hajj management is one form of technical Hajj policy in 1992 in order to improve services, data processing and information. It aims to develop a data collection system from manual to automated process through computerization. It has a pretty good foundation associated with the increasing in the efficiency and effectiveness of research related to improvement of pilgrimage services. One of the output products is (SISKOHAT). Munir (2013) recommended to audit the SISKOHAT in order to improve efficiency of the Hajj services process.

e-Hajj in other countries: e-Hajj has been developed in several countries although its shape is very simple and yet synergize the elements of Hajj services from registration to repatriation of pilgrims which can be done with data integration. However, it need to be appreciated because these countries have been providing services and provide information to the actual knowledge about the Hajj to their citizens such as video services, statistics of e-Hajj hajj savings from Bangladesh (www.hajj.gov.bd) and Malaysia (http://www.tabunghaji.gov. my/web/guest/ e-servis-haji) while Saudi Arabia (https://ehaj.haj.gov. sa/EH/index.xhtml) provide relevant information about the services in the holy land. However, we can not find any disscusion about CSF in those e-Hajj.

e-Government: According to the Council of the National Information and Communication Technology (DETIKNAS) (Hasibuan, 2011) the concept of e-Government can be defined as the application of information and communication technology. World Bank defined e-Government as the use of IT by government agencies that have the ability to relate to people, businesses and other government agencies (World Bank Group). According to Maio, e-Government is a process of transformation of public service both internally and externally through the Internet, information technology and communication that aims to optimize public services increasing the participation of business and society and enhance the ability of the government. From some of these definitions, e-Government is defined as the use of information and communication technology with five objectives which is. Improving the productivity of government agencies. Helping achievement a particular outcome for the government. Assisting the implementation of the reform of the bureaucracy in government institutions. Building trust between the and the public. Integrating a variety of services among government agencies (Hasibuan, 2011). Thus, the purpose of e-Government is nothing but the achievement of good governance (Sinambela, 2011). There are factors that

affect the achievement of government good governance which are grouped into three categories (Backus, 2001; Furuholt and Wahid, 2008) which are: management, infrastructure and human factor. Factors related to the management of strategic issues, change management, political leadership, institutionalizing and ongoing monitoring as well as the evolution of the project. Meanwhile, infrastructure factors related to ICT infrastructure, legislation and financial resources. Then the human factors including competence and expertise, training and trust. The biggest obstacles in e-Government in some cases are non-technical issues such as the management factor (Furuholt and Wahid, 2008) political opposition and internal employee resistance. It requires effectiveness process and leaders who understand the bureaucracy and implementing change strategies to overcome these problems. Meanwhile, the ICT factor, institutional weakness, lack of qualified personnel and adequate training identified as a major failure factor of the development of e-Government as expressed by the United Nations (Rokhman, 2008).

Three major e-Government activities consist of: innovate public services (G2C); innovate business services (G2B) and innovate the way government researchers (G2G) (Munir, 2013)

The study of literature CSF in e-Gov: Azri *et al.* (2010) made three paradigms for success in the implementation of e-Government which are: organizational paradigm, the paradigm of technology and user paradigm. Mapped the key to a successful implementation of e-Government into four categories, namely: management, infrastructure, human resources, other factors (innovation diffusion). And (Napitupulu, 2015) mapped several key success factors of implementation of e-Government into CSF for e-Government implementation, case study of Bogor city in Indonesia.

ITPOSMOs Model: Krish Rugchatjaroen using the model's IT POSMO in Bangkok (Information, Technology, Processes Objective and Value, Staffing and Skills, Management systems and structures, Other resources). In line with (Elkadi, 2013) who also used a model of postmodernism and ISSM IT case studies in Egypt as shown in Fig. 2:

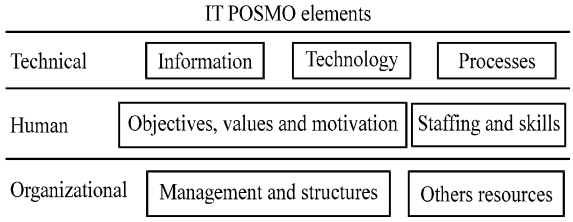

Fig. 2: Elements of IT POSMO

Description of ITPOSMO (Elkadi, 2013):

- Information (factors related to quality and prerequisites of system inputs and outputs)
- Technology (factors such as the availability and compatibility of hardware and software)
- Processes (alignment and integration between the system and existing/new processes to achieve stated objectives)
- Objectives, values and motivation (e.g., organization culture, guiding values)
- Staffing and skills (factors such as the availability of skilled personnel and adequacy of training provided for using the system)
- Management and structures (factors such as managerial practice and flexibility of organizational structures)
- Other resources (money and time)

MATERIALS AND METHODS

The object of research conducted at the Directorate General of Religious Affairs Hajj and Umrah. The method used in this study refers to the recommendation of Abdelghaffar (2003) who used top-down approach to identify CSF.

This research methodology (Fig. 3) has four phases that aims to identify the CSF for e-Hajj implementation in Indonesia which involve; investigate the existing models and success factors for e-Hajj implementation, preparation process, execution process and data analysis process.

In the first phase we use ITPOSMO to investigate the existing models. ITPOSMO have been used in Bangkok Egypt (Elkadi, 2013) and Sulawesi (Hwang and Syamsuddin, 2008). Second, in preparation process, we collect key success factors from which has 57 keys (Azri *et al*., 2010) which has 11 keys and (Napitupulu, 2015) which has 55 keys. In the third, we merge all of the key success factors and map it to ITPOSMO Model. And lastly in the fourth phase, we analyze those factors in order to determine the propose CSF for implementation e-Hajj in Indonesia.

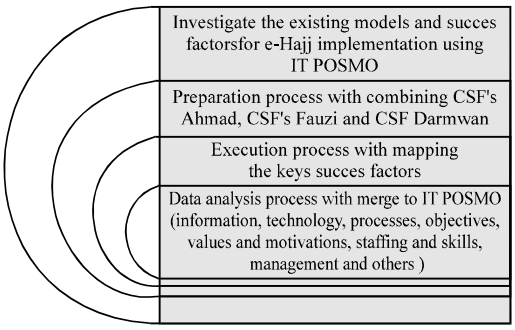

Fig. 3: Research activities

RESULTS AND DISCUSSION

The results of mapping from three researchers can be seen in Table 1. After that we can conclude the key success factors categorized into information, technology, processes, objectives, values and motivation, staffing and skills, management and structures and other resources as presented in Table 2.

The results obtained from Table 2 a breakdown by ITPOSMO which is: information about factors related to quality and prerequisites of system inputs and outputs; technology related factors such as the availability and compatibility of hardware and software; processes related alignment and integration between the system and existing/new processes to achieve stated objectives; objectives, values and motivation related with e.g., organization culture, guiding values; staffing and skills related with dfactors such as the availability of skilled personnel and adequacy of training provided for using the system; management and structures about factors such as managerial practice and flexibility of organizational structures and other resources about money and time.

Table 1: ITPOSMO element's

Parameters	Darmawan	Fauzi	Ahmad
I	Good information quality using portal/application citizen statisfaction legal framwork	Ease in use innovation	
T	Good system quality electronic transaction supportive ICT infrastructure support interoperability gradual implementation re-useable system secuirty good system useability continuous improvement	Infrastructure copmatibility support device	User-friendly system accessibility of system flexibility of system security of system
P	Guidlines for e-Government development supportive cultural good system modeling system development market sinergy and potential		
O	Selfe-sustanaible revenue highly demand of citizen, trust strong leadership willing to chang user premium fees reward and recognition	Benefit, confidance professionals provider leader ships	Leaderships
S	User and stakeholder, training, user citizen copmuter internet good team skills and expertise creativity and innovation	Professionals training abality competency	User copmuter efficacy training
M	Good governance, good service quality, deal with bureaucratic processes, monitering and evaluation external pressure, good partnerships with others good chang managment, awarness, top managment support, good planning, system campaign, good coordination between all project participants, good oursourcing strategy, good and clear organizational structure, make better business process, prioritization of e-Government, international support, supportive government policy, e-Participation, good project managment, prototype, citizen relationship managment, political support and stability, best practice considratio	Strategic issue supperstructure, human resource requirement, monetering and evalution project, regulation and law institution, change management	Vision organizational cultur, awarness, top management support
O	Enough funding	Finance resource	

Table 2: Key success factor as category

ITPOSMO elements	Keys success factors
I (Information)	Information quality; user satisfaction; accountable data; ensuring security system; user-friendly; service innovation using
T (Technology)	the portal system or application inter face; information integrated; documentation archive; e-Payment transaction flexibility on technology support; quality system; availability of support infrastructure/ICT services; system function; facilities and infrastructure; tools and equipment; compatibility; flexibility of technology; accessibility good security system; there is no gap between design and implementation
P (Process)	Aguide to developt e-Government; implementation done gradually; sustainable improvement
O (Objective,value, motivation)	Transparent and equal system; trusted system; supportive social environment; system meets user expectation; system can reduce corruption potential; socio-cultural support; confidence in the system and their government; leadership; commitment; loyality; skill; moral; mindset; mutual respect; awareness; initiative; confidence; responsibility; team-work; professionals; credibility; acknowledgement; changed willingness
S (Staffing and skill)	Contribution of user and stakeholder; training for user and employee; skill and expertise of member; user ability to use computer or internet; creativity and innovation trigger; professional provider; ability for skill and staffing; skills and competence; aptitudes and interests; ability to maintenance the system
Management	Vision; organizational culture; bureaucracy; superstructure; service quality; human resource reqruitment; planning; regarding excess campaign system; coordination with team; outsource strategy; organizational structure; monitoring and evaluation; cooperative with others institution; awareness from governance and society; IT government; development of e-Government priority; potential and market synergies; external pressure is driving implementation of e-Government; making business better process; change management right organizational ability to make decisions; Chain of command; government policies and supporting; the existence of public participation in policy making/public decision
Others resource	Finance

CONCLUSION

We have identified and proposed 82 CSF for e-Hajj implementation in Indonesia which categorize into 6 elements in IT POSMO (Information, Technology, Processes, Objectives, values and motivation, Staffing and skills, Management and structures and other resources). We needs future research to identify the most important CSF that appropriate for e-Hajj in Indonesia. So, for the future research there should be a study to determine the most important factors, some methods like focus group discussion with experts in their field, AHP or using software like AMOS can be considered as the method.

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