



Varying criticality of key success factors of national e-Strategy along the status of economic development of nations

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ABSTRACT

Many studies mention the importance of national e-Strategy as it is a vital contributing factor for ICT-enabled development. However, it is difficult to find a conceptual framework that suggests how the national e-Strategy should be defined and applied by the target country. This creates more confusion for policy makers. This paper reviews previous research on national e-Strategies to recognize its significance as a major contributing factor. Based on that, this research defines the critical success factors of national e-Strategy and investigates the possibility of prioritizing factors by the scale of economy through a Delphi survey. By reviewing the evaluated status of e-Readiness and co-relating the evaluation with economic status, we may further investigate the significance of the digital divide and national e-Strategy. The outcome of this research may be applicable in differentiating critical success factors from general ingredients of National e-Strategy.

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1. Introduction

National strategy for ICT, or sometimes called 'national e-Strategy' may be set in place to contribute to national growth. According to the World Bank's study, a country needs to have a significant stock of ICT or users in place and perhaps be more advanced in using that stock for economic transformation (Hanna, 2003). Many countries have put their effort into promoting "National e-Strategy" as a way of enhancing their respective countries' economic growth. For example, in South Korea, comprehensive national e-Strategy has been a key driving factor in the phenomenal rebound of its economy from the 1997 financial crisis: the ICT industry's contribution to GDP growth rose from a mere 4.5% in 1990 to an astounding 50.5% in 2000 (Hanna, 2003). However, it is still difficult to understand the critical ingredients of the strategy because there are different definitions and interpretations of critical success factors for national e-Strategy (Lavin, 2005; Hanna, 2003; Heeks, 2003). Moreover, looking at the statistics analyzed by monitoring institutions such as the UN, e-Readiness shows the seriousness of digital divide between developed countries and developing countries. According to the report from the Technical Assistance Program, jointly performed by the National Information Society Agency and the World Bank, most of the client countries (Morocco, Republic of Congo, Kazakhstan, Myanmar, and Argentina) have national e-Strategy plans already set in place (National Information Society Agency, 2004a). However, it is unlikely that these countries would exercise the plans effectively considering their strategic targets and environment. In reality, those strategies are

planned by benchmarking strategies taken from developed countries. Thus, it is important to find a conceptual framework that suggests how national e-Strategy should be defined and effectively applied according to the characteristics of the target country or region.

This paper reviews the research on the critical success factors of national e-Strategy. This research also reviews the evaluated status of e-Readiness of countries, and co-relates the economic status and e-Readiness status to figure out the significance of the digital divide among developed, developing, and underdeveloped countries. Finally, this paper investigates the possibility of prioritizing the critical success factors of national e-Strategy by the scale of economy on the basis of Delphi analysis. The outcome of this research may be applicable to differentiating critical success factors from general ingredients of national e-Strategy, and selectively applying critical success factors according to strategic priorities.

2. Literature review

2.1. Defining and classifying critical success factors (CSFs) of national e-Strategy

Strategies help constituents understand where organizations will be primarily focusing their resources for the time frame of the strategic plan (Allison & Kaye, 2005). The World Bank defines an e-Strategy as a set of coordinated actions and policies that seek to accelerate the social, economic, and political development of a given country or region through the use of telecommunications, information networks, and the technologies associated with them, based on the experiences of developing countries (World Bank, 2005a). Based on 'Monitoring and Evaluation Toolkit for e-Strategies Results' developed

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Fig. 1. Logical framework pyramid of e-Strategy(Lavin, 2005).

by the World Bank (Lavin, 2005), the e-Strategy pyramid has four hierarchical structures: policy, strategic priorities, implementation plan, and monitoring and evaluation (Fig. 1). At the policy level, the target country will determine how and why specific themes are priority objectives. Strategic priorities are then determined. Most business strategies begin with a review or assessment of the current state of business. A similar approach is required for the development of national e-Strategies. Based on the priority objectives defined at the policy level, strategic priorities may be assessed to determine what needs to be done for the target countries.

Prioritizing strategy is one of the mandatory steps in determining what needs to be done for the target countries. The strategic priorities are essential ingredients in drawing up an implementation plan, and can include key initiatives and action plans. And, these assessed priorities become critical success factors of national e-Strategy. The concept of Critical Success Factor (CSF) of national e-Strategy is known by a variety of terms and definitions. According to the World Bank, it

used the term “strategic priorities” or “identification of the pre-requisites for success” (Lavin, 2005). Other research used self-defined terms such as “Guiding Principles” (Department of Economic and Social Affairs, 2003), “Success Barriers” (Ministry of Science, Technology and Higher Education, 2005), “Success Indicators” (Lavin, 2005), and “Strategic Responses” (Heeks, 2003). These various terms all imply CSFs. By reviewing previous literature, this research identified 15 CSFs as strategic priorities of national e-Strategy (see Table 1). These CSFs can be characterized by policy, technology, and cost. These characteristics may be applied in determining strategic priorities of national e-Strategy with appropriate considerations given for the target country’s environment and available resources.

2.2. Strategic priorities and the scale of economy

In the WSIS (World Summit for the Information Society) 2003, world leaders adopted a Plan of Action encouraging national e-Strategies be developed (ITU, 2008b). In the WSIS 2005, the Tunis Agenda clearly stated that developing countries were to be encouraged to prioritize some indicators such as funding, ICT Infrastructure, Training and etc (ITU, 2008a). The Agenda also pointed out that there was a distinctive gap between developed countries and developing countries in the capacity to build ICT-enabled economy and society. The World Bank study also indicated that e-Strategy must focus on government priorities in ICT development and evolve along with country’s development needs and implementation capacities (World Bank, 2006). Due consideration must be given to the issue of whether or not strategic priorities should be determined and applied differently according to the scale of economy. Research that focused on CSFs of developed countries emphasized ICT service’s extraordinary impact on ICT-enabled economies. Also the “Culture of Civil Service” could be one of the influential priorities because one of the key focuses of E-Government is to increase the public’s satisfaction by adopting and applying ICT technology toward the public services. On the other hand, the United Nations (Department of Economic and Social Affairs, 2005a) pointed out the success factors for developing countries by looking into several best practices, such as Korea and Estonia, including: “ICT Infrastructure,” “Funding,” “Human Capital,”

Table 1
Classification of CSF: critical success factors

CSF	Low cost/ policy-oriented	High cost/ tech.-oriented	Examples of CSF at national-level initiatives	References
ICT Infrastructure		✓	Broadband Infrastructure, PSDN, DSL, Fixed Line, Mobile Mobile Network	Lavin (2005), World Bank (2005a), Heeks (2003), Janssen et al. (2004), Oh and Hong (2006)
Funding		✓	Financial Investment, National ICT Budget, Loan	Lavin (2005), Oh and Hong (2006), World Bank (2005b), RTR (2006)
Human Capital		✓	Trained IT Professionals, Public’s Internet Access	Lavin (2005), World Bank (2005a), Heeks (2003),
Educating Public		✓	Reducing Digital Divide	Issak (2005), Heeks (2003), Oh and Hong (2006), Ministry of Home Affairs (2005)
Culture of Civil Service			Culture of Civil Service, Public’s Acceptance of IT, Internet Internet Usage	Oh and Hong (2006), Lawrence & Samuel (2000)
Literacy	✓		Internet illiteracy	Department of Economic and Social Affairs (2004)
ICT Services		✓	ISP, e-Commerce, G2C, B2C, B2B, Web Portals, Internet Contents	Kunstelj and Vintar, (2004), Janssen et al. (2004)
Institutional Structure	✓		E-Government Committee	Heeks (2003), Ministry of Home Affairs (2005)
International Cooperation	✓		Technology Transfer, Applying Loan	Department of Economic and Social Affairs (2004)
Privacy & Security		✓	PKI, Encryption, Digital Certificates, Anti-Hacking Program	Department of Economic and Social Affairs (2003; 2004),
Legal Framework			Information Act, Security Act, Privacy Privacy Protection Law	Heeks (2003), RTR (2006), Oh and Hong (2006)
e-Participation			e-Voting, Public Feedback, e-Press	Ministry of Home Affairs (2005), Oh and Hong (2006)
Monitoring & Evaluation			UN e-Readiness Evaluation, Auditing	Department of Economic and Social Affairs (2004), Ministry of Home Affairs (2005)
Political Leadership			Leader’s Commitment, National CIO	Department of Economic and Social Affairs (2003), Heeks (2003), RTR (2006)
Private Partnership			Promoting IT Industry	Lavin (2005), World Bank (2005a), RTR (2006), Oh and Hong (2006)

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