Chapter 79
E–Government Clusters:
From Framework to Implementation

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ABSTRACT

The concept of industrial clusters has received much attention in the literature over the past few decades and many examples of clusters exist today in a variety of industries, from manufacturing to services. Within such clusters, competitive cost and innovation advantages are generated through co-location. Very recently several examples of e-government clusters have emerged. This chapter offers a conceptualization of what an e-government cluster is, and how it may be different from other industrial clusters. This chapter is an attempt to formulate a framework for e-government clusters and bring out the necessary conditions for policy decisions to support the creation of such a cluster. An attempt has also been made to validate the proposed framework on the basis of case studies and to derive some recommendations to sustain the operation of e-government clusters.

INTRODUCTION

Information and Communication Technologies (ICTs) are increasingly being used in government as indispensable tools, in an effort to transform them into efficient, effective, transparent and reliable organizations at national, regional and local levels. Electronic government (e-Government)

has been defined as the application of ICTs in transforming the internal and external relationships of governments [UN World Public Sector Report 2003]. While many governments across the world have implemented e-government projects, many have failed to live up to expectations due to the design-reality gaps, which were often not considered during the planning stages (Heeks, 2001).

Since e-government is as much about government as about electronic ('e') (Riley, 2002),

its implementation is likely to involve active and shared participation of several players from private, public and social sectors. Often, governments face a shortage of the right expertise, right technologies and right solutions to successfully implement e-Government projects. This situation is similar to that faced by most industries during their initial stages, especially when they set-up in new locations or regions. Subsequently, the availability of right skills and technologies improves with several firms joining the region resulting in the formation of clusters.

The concept of industrial clusters has received much attention in the literature over the past few decades and many examples of clusters exist today in a variety of industries, from manufacturing to services (Porter, 1990). Recently, several projects have seen the light of day under the heading of "e-Government clusters". Examples of these include the e-Government cluster in Hungary, Ubiquitous IT (u-IT) cluster in Korea and the GAUDI e-Government cluster of the European Union. The e-Government Cluster in Hungary has been the initiative of the private sector with active support from the Government of Hungary at local, regional and national levels. The u-IT cluster of Korea is driven by the government and primarily focuses on the development of ubiquitous technologies for the implementation of e-Government at the local level. The GAUDI e-Government cluster is the result of the PRELUDE project initiated by the European Commission under the 5th Framework Program with an aim to establish 9 European Clusters for Innovations (ECI). The GAUDI e-Government cluster is a consolidation of the Lombardy cluster of Italy, Kouvala cluster of Finland and Catalonia cluster of Spain. Unfortunately, although the concept of industrial clusters has been widely examined in the literature, no framework has yet been developed within the context of e-Government, something from which e-government clusters such as those mentioned previously might benefit. This chapter proposes to develop such a framework answer-

ing the basic question '*What are the necessary pre-conditions for Government to support the creation of e-Government cluster?*' As a logical sequence to this question, an attempt has been made to address the question '*What can be the likely success factors which sustain the operation of e-Government cluster?*'.

Historically, different regional economies around the world had within them specialized industries operating in the form of so-called clusters. These clusters were composed of main firms, which produce industry output, and supporting firms which actively contribute to the efficient operation of the main firms. Through a mix of competition and cooperation, such firms tend to create sustainable competitive advantages within their industry and the cluster, as compared to other isolated players of the industry (Porter, 1990). Famous examples of such regional clusters include Silicon Valley of the United States, the pharmaceutical cluster centered on Basel in Switzerland, and fashion-leather cluster of Northern Italy. Such agglomeration of firms brings about improvement and innovation owing to the mutual reinforcement of cluster-based factors, subsequently leading to sustained competitive advantage. In other words, firms within such a cluster benefit from agglomeration economies with reinforced effects. The cluster becomes a vehicle for maintaining diversity and overcoming the inward focus, inertia and inflexibility that slows or blocks competitive upgrading and new entry (Porter, 1990).

It is with these advantages in mind that attempt have been made around the world to create e-Government clusters. However, it remains unclear whether the concept of cluster can be applied in the context of e-Government. Neither can one readily find a specific framework for e-Government clusters in the literature. Simply transposing the original notion of clusters, as defined by economic geographers, to the field of e-Government may not be the best way to plan or enhance such a cluster.

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