Chapter 1

From e-Government to e-Governance:
A Holistic Perspective on the Role of ICTs

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ABSTRACT

In this chapter, the author elaborates on the concepts of e-Government and e-Governance and place these concepts in the broader context of the introduction and diffusion of information and communication technologies. The question that is being addressed is "what should an effective and pro-active e-Government do?" For that purpose, the ICTs are not only considered general purpose technologies, but recognized as the driving force of an unfolding technological revolution. As such, a recurrent pattern in techno-economic and socio-economic development can be discerned that goes back to the First Industrial Revolution in Britain around the late 1700s and early 1800s. It is argued that appreciating the fifth instance of this pattern and recognizing the challenges each transition invokes can inform the policy formation process and make policy action more effective. In the broader context of roles that governments may assume, a stepwise approach is introduced to address the many challenges the diffusion of ICTs is bringing about in the economic and social realm, aimed at reaping the benefits implied in the new techno-economic paradigm.

INTRODUCTION

The term e-Government is generally associated with the use of ICTs by governments. The OECD defines e-Government as the use of information and communication technologies, and in particular the Internet, as a tool to achieve better government

(OECD, 2004). This notion of 'better government' is typically translated, first of all, into improving the administrative service delivery. In a next step, the improvement of the policy-making process through ICTs is being envisioned. In introducing information technologies the principle objective is improvements of process efficiency, the use of communications technologies makes the government more accessible, it may extend the reach and

improve the involvement of the citizenry, thereby further improving efficiency, as well as the quality of the governing process.

Enabling Technologies

By introducing information and communication technologies, the peculiarities of these technologies are being introduced. For instance in the business environment, the early investments in IT hardware and software did not lead to productivity improvements being measured at the national aggregate level. This has led to the hypothesis of a so-called 'productivity paradox.' A variety of possible explanations have been brought forward by economists for this lack of improvement in total factor productivity, all inconclusive. However, more recently detailed analysis by Brynjolfson has shown a significantly positive relationship between IT investments and productivity in a series of firm level studies. Their findings suggest that productivity improvements are resulting *if and only if* investments in hardware and software are complemented with investments in skills development *and* the related processes are being re-engineered to take the full benefit of the capabilities that the information technologies are offering (Brynjolfson, 1992; Brynjolfson & Hitt, 1998)[1]. For the application of IT in governments, this conclusion poses additional challenges as the user is often the public at large, and investments in skills development and process re-engineering can only be realised in an indirect way.

Nonetheless, the role of ICTs for economic growth and social development are broadly recognized, as illustrated by the various e-Action Plans formulated by governments around the globe. For instance, eEurope as part of the Lisbon Agenda in 2000, the Information Super Highway initiative in the USA in 2000, the e!Japan initiative in 2001, and the eKorea Vision of 2002.

To appreciate the challenges governments are facing, one should recognise that the impact of 'informatisation' on the economy and society through information technologies is comparable to the impact of the earlier principle of 'mechanisation.' In this respect we can refer to what Lipsey et al. call 'General Purpose Principles' (GPPs) or concepts that are employed in many different technologies that are widely used across the economy for many purposes and that have many spill-over effects (2005). Information technologies are the embodiment of such a principle and the computer, in its many manifestations is a recent representation of what is called a 'General Purpose Technology' (GPT), being defined as: "a single generic technology, recognizable as such over its whole lifetime, that initially has much scope for improvement and eventually comes to be widely used, to many uses, and to have many spill-over effects" (Lipsey, et al., 2005). This also applies to the Internet. Both are part of the general GPT category of information and communication technologies, which includes writing and printing. Both GPTs started out as a product, but have become transformational in terms of process and organisational change.

From e-Government to e-Governance

The recognition of IT and CT as GPTs is crucial and moves the issue beyond the domain of e-Government into the realm of e-Governance.

To govern is to steer and in the context of governments, this is typically understood as the exercise of authority, to control and direct the making and administration of policy. Government is hence the act or process of governing. Governance is a much broader notion and can be understood as the political and economic processes that coordinate activity among economic actors (Campbell, Hollingworth, & Lindberg, 1991). Groenewegen defines governance as the coordination of transactions, which includes information, negotiation, and decision-making. The governance can be both private, i.e. between private actors in private governance structures, and public, i.e. between public actors in public

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