Chapter 7

Governance and Public Policy Challenges in Managing Disruptive and Innovative Technologies

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ABSTRACT

This chapter is an effort to promote and guide thinking about the global and local challenges in how governments respond to innovative and disruptive projects and technologies. The chapter is based on the considerations of and concerns regarding the challenges and changes that we face on a global scale and how it impacts on the notion and need for innovation. Not all inventions or innovations are disruptive or serve the interest of the public at large, and some even may have serious harmful consequences or impacts. These may be unforeseen or sometimes deliberately obscured and perhaps just serve the narrow interests of profiteers. Governments are required to consider their roles and plan to be responsible and proactive to ensure that the best interests of both the business and public sector are pursued for the purposes of long-term sustainability.
INTRODUCTION

During the past few decades there has been a rapid increase in many innovative and disruptive technologies being introduced to address problems and issues emanating from the growing demands for improved quality of life, and those resulting from new trends and societal changes observed regionally and globally. In particular, innovations and new technologies developed in response to addressing demands for cost effectiveness, efficiency and productivity in industry and public service delivery (Ahlstrom, 2010; McKinsey, 2013). Most institutions are challenged to intervene in ensuring that such innovations and new technologies are wisely evaluated and considered as responsible, responsive and sustainable solutions to many vexatious problems and challenging conditions and changes in society. Governments in particular have an important role to play to ensure good governance and policy management of such innovations and new technologies.

BACKGROUND

Apart from evolutionary innovations such as those we often come across in areas such as public transportation systems, medical science, and information technology, we have also seen radical and disruptive technologies introduced, such as UAV’s, Open Source Intelligence, Intelligent Sensor Monitoring, Uber Taxis, Airbnb, novel energy generation systems, water purification systems, and online education, to mention a few. The experience has been that many of these disruptive and innovative technologies are initiated in the private sector, with the role of government limited to broad oversight and by providing policy responses that were reactive, and not proactive (Lynch, 2017; Kaal & Vermeulen, 2017).

Limited literature and research is currently available on how governments should respond to these issues, and the innovations and new technologies that are developed in response to the pressing needs, changes and challenges as described in this chapter. In addition to review much of the literature that has been developed, and which mainly focuses on this phenomenon, this chapter will also propose a framework or model for the governance and management by government.

METHODOLOGY AND FOCUS

This chapter proposes to look at existing literature generated by scholars who have approached the subject from a management science point of view, and in particular valuable work done and published in the fields of innovation. The author uses journal
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