


# Chapter 6

## Addressing Digital Disruption Through Systemic, Self-Correcting Governance Strategies

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### **ABSTRACT**

*Artificial intelligence, blockchain, cloud computing, and the Internet of Things are creating digital disruption that is changing how governance is conducted and that the top-down, rigid systems have their limits. Systemic, self-correcting governance is described in this chapter based on cybernetics and systems thinking because of volatility and complexity. It relies on the theories like the Viable System Model and adaptive governance to combine the examples of the global cases with mentioning the gaps existing in the Global South settings and ethics. A theoretical framework is projected to lead institutions to reflexive, resilient, and inclusive governance, both theoretically and practically providing avenues to policy makers and leaders of organizations.*

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## 1. INTRODUCTION

The governance systems and organizational practices have been fundamentally changed by the rapid growth of the digital technologies (artificial intelligence, blockchain, the Internet of Things, the cloud computing). These technologies have not only broken the conventional industries but have transformed the institutional structures of collective decision-making, accountability, and social responsibility (Radanliev et al., 2020). The digital age is paradoxical: on the one hand, it has never been as efficient, helpful, and inclusive as it has become now, and on the other hand, it has been exposed to threats of inequality, systemic vulnerability and ethical challenges. The necessity to reconsider governance is a technological issue, to say the least, but also a systemic and social requirement. This chapter addresses this challenge and examines systemic and self-correcting governance approaches based on cybernetics, complexity science, institutional resilience and participatory approaches that are both theoretically and practically effective. This theme is of global significance and can be traced to the increasing discrepancy between the conventional models of governance and the dynamic environments that the models are supposed to deal with. Classical forms of governance are extremely dependent on the idea of hierarchy of control, predictability, and stability, which do not work well in situations where disruption is a rule. Governance in the face of complexity should be robust within the rule of law and have to adapt to the ever-changing world as Cherry (2008) pointed out in the context of important industries. However, a lack of governance remains evident in the institutions, where the shortcomings are apparent in such issues as data privacy, crisis management and regulation of technology. As an example, the experience of smart city projects in various regions has identified the conflict between efficiency and equity and has shown that technological implementation without systematic adjustment is prone to create fragmented accountability and marginalization (Trencher et al., 2014). These contradictions enhance governance designs that incorporate reflexivity, feedback, and inclusivity in their design.

System thinking and cybernetics led to the development of the idea of a self-correcting, systemic form of governance, where the presence of feedback loops and interdependence is vital in determining organizational viability. Complexity science develops this approach by considering governance systems as complex adaptive systems in which the results are not predictable by the interactions between actors and technologies (Sengupta, 2017; Ulysses, 2017). The institutional perspectives are helpful to remind us that the aspect of governance is not only technical but it is based on the cultural legitimacy, norms and practices (Tierney, 2004). High-reliability organization theory proves that high-risk situations can be resolved by installing cultural practices of vigilance and responsiveness to create resilience (LaPorte and

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