Chapter 16

Digitalising Healthcare in Developing Economies: Challenges and Mitigating Strategies

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ABSTRACT

There is an increasing demand for the healthcare industry in developing economies to reform their existing fragmented paper-based systems to take advantage of the several opportunities that digitalisation brings. However, the existence of specific contextual factors constrains the process of digitalisation in most developing economies. Underpinned by the concepts of installed base and cultivation, this chapter adopts a qualitative multiple-case study approach to examine the contextual factors that influence the development, implementation, and adoption of digital health systems in the Ghanaian and Nigerian contexts. Results of this chapter reveal 13 key challenges and their corresponding mitigating strategies that were adopted in specific instances to facilitate digitalisation in both contexts. A comparison of findings for the two contexts is also discussed.

INTRODUCTION

There is an increased recognition that digital health systems and other health information technologies could better replace the traditional, fragmented paper-based health record systems in Developing Economies (DEs) (Mengiste, 2010). As a result, there has been an increasing demand by healthcare organisations to streamline their processes by adopting various kinds of digital innovations within the
health sectors of DEs. According to Fraser and Blaya (2010), some of the key factors that have accounted for the recent increase in adoption of these technologies include the availability of more robust, cheaper and lower power hardware/software; increased internet access and usage; and the emergence of several high-profile projects in most DEs. It is believed that the introduction of these digital innovations within the health sector could bring about significant cost reduction and improved efficiency and effectiveness, particularly, in the turnaround time for the delivery of healthcare services in DEs (Braa, Hanseth, Heywood, Mohammed, & Shaw, 2007). Other authors, including Kasemsap (2017), have even argued that the use of digital health systems in DEs has the potential to enhance healthcare performance and facilitate the achievement of strategic goals.

Despite the opportunities and benefits that digitalisation promises to the healthcare industry in DEs, its implementation is often fraught with context-sensitive challenges which inhibit its success (Mengiste, 2010). For instance, researchers (including Asare, Otoo-Arthur & Frimpong, 2017; O’Connor & O’Donoghue, 2015; Acheampong, 2012; etc.) have identified some of the underlying challenges that inhibit the successful digitalisation of healthcare services in DEs. Notable among them are the cultural, political, and cognitive factors (O’Connor & O’Donoghue, 2015), as well as other social factors which include the lack of commitment from staff, inadequate skills and knowledge at the local level to deploy new systems, and inconsistent power supplies (Adedeji, Irinoye, Ikono & Komolafe, 2018). Although some studies (e.g. Mengiste, 2010; Braa et al., 2007) have identified and proposed flexible strategies for mitigating IS implementation challenges within healthcare settings, we posit that research gaps still exist in specific localised contexts. In this chapter, we explore such challenges in the Ghanaian and Nigerian health sectors, which are both DEs with prospects of digitalising their health systems based on evidence observed in extant literature. Since context plays a role in Information Systems (IS) research (Hong, Chan, Thong, Chasalow & Dhillon, 2013), we argue that context-specific strategies would mitigate the underlying challenges, and facilitate digitalisation in these contexts, as well as other similar contexts.

This chapter, therefore, goes beyond mere factor lists of the challenges associated with digitalising the health sectors of DEs, to explore the different contextual challenges within localised settings, and the choices of actions that were adopted to mitigate such challenges. The chapter adopts the concepts of installed base and cultivation as its theoretical base to explore such factors within the Ghanaian and Nigerian contexts by addressing the main research questions: “What are the common and context-specific challenges that influence healthcare digitalisation in Developing Economies?” and “What context-specific strategies could be formulated and adopted to mitigate such challenges?”. This chapter has both theoretical and practical implications for professionals, practitioners, and researchers on how specific strategies could be formulated to mitigate context-specific challenges that are associated with healthcare digitalisation in DEs.

The rest of the chapter is structured as follows: Section two presents a brief conceptualisation of digitalisation and its adoption within the health sectors of two DEs. Section three discusses the theoretical underpinning of the chapter. Section four presents the methodologies used. Section five presents the case descriptions and discussions of the chapter. Section six presents the implications of the study, as well as the conclusion and recommendations for future research.
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