Chapter 66
Blockchain Technologically Driven Innovation at the Gulf Cooperation Council Countries: An Overview

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ABSTRACT

This chapter delves into the innovation of blockchain technology and its benefits for advancing the economic growth in the Gulf Cooperation Council (GCC) countries. Blockchain technology provides the security and reliability that is required in the GCC region for enhancing the technology acceptance level of its population. Apart from providing security, blockchain technology offers financial efficiency, cost reduction, and the elimination of operational risks. Blockchain technology is equally beneficial for nonfinancial industries, such as the healthcare and education industry of the GCC region. The digital revolution based on blockchain technology is beneficial for GCC countries to shift their economic dependence from oil to innovations driven by technology. This will move the GCC to develop more smart cities as the GCC region has an ample amount of financial and human resources that are required for successful integration of blockchain technology in its numerous industries.

INTRODUCTION

Gulf Cooperation Council (GCC) is an economic hub in the Middle Eastern that comprises of six major Arab states, which include Saudi Arabia, Bahrain, Qatar, Oman, Kuwait and the United Arab Emirates. Among the Middle Eastern countries, only Iraq was excluded from the GCC establishment whereas

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inclusion of other countries, such as Morocco and Yemen, has been under consideration since few years now. The Charter of the Gulf Cooperation Council was signed by all member states on May 25 1981 (Ayuso, Villar, Pastor, & Fuentes, 2015). Since the establishment of the GCC charter, its member states have supported each other economically as well as politically for ensuring socioeconomic and socio-political sustainability in the region.

The GCC was mainly established for economic union, which facilitates the individual economic growth of the GCC states. It is further observed that the GCC countries have high dependence on their oil reserves, as Saudi Arabia, Kuwait and the United Arab Emirates are among the top countries with highest oil reserves on a global level. The total GDP of the GCC member states exceeds $3.5 trillion due to the large oil reserves and stable economic conditions in all GCC countries (Cammett, 2018). According to 2017 estimates, the total population of the GCC region has surpassed 54 million whereby foreign workers and expatriates represent a large percentage of the total population, especially in the United Arab Emirates. Accordingly, the economic growth of the GCC countries is majorly dependent on productivity of foreign workers, oil production, and foreign direct investment.

The increased dependence of GCC countries on their oil resources increases their risk exposure towards economic recession and financial downfalls. The drastic decrease in global oil prices during 2014 negatively affected the economic performance of GCC countries (Cammett, 2018; Al-Maamary, Kazem, & Chaichan, 2017). The governments of GCC countries have also previously realized the importance of shifting their dependence on economic efficiency from oil production. Over the last few years, GCC countries have explored numerous avenues for economic transformation. Among some of the greatest possibilities, digital technologies offer a promising economic future. The digital transformation suits the economic structure of GCC countries, especially because of abundance of capital and unsaturation of its different markets in terms of technological advancements and modifications. Despite the fact that the United Arab Emirates has taken a lead in digital transformation in the Middle Eastern region and among GCC member states, there are still major technological transformations that are required for establishing Dubai as the digital hub of the region.

Among different technological innovations and advancements in the 21st century, blockchain technology has gained popularity due to its countless benefits for the global IT industry as well as global financial industry. Blockchain technology induces automation in financial as well as nonfinancial transactions, allowing the client and institution to execute transactions without the interference of brokers (Paech, 2017). Such benefits of blockchain technology pose a high potential for maximizing the economic growth of GCC countries due to the elimination of financial risks from its banking industry, capital and stock markets, and information and communication technology (ICT) systems (Pinna, 2016). Irrespective of the large capital investment associated with induction of blockchain technology, it offers a thriving economic future for GCC countries.

BACKGROUND

Blockchain technology has been defined as, "blockchain is essentially a distributed database of records, or public ledger of all transactions or digital events that have been executed and shared among participating parties" (Crosby, Pattanayak, Verma, & Kalyanaraman, 2016, p. 8). Every transaction in the ledger is certified as far as majority of the participants in the system have the same recorded transaction. Accordingly, the reliability of a blockchain system is dependent on the linked transactions (blocks) whereby every