

## Chapter VIII

# Electronic Payment Systems in Developing Countries for Improved Governance System

**Hakikur Rahman**  
*SDNF, Bangladesh*

### ABSTRACT

*Payment system is an age-old system of transfer of properties. It has taken different forms of transactions depending on demand, usage, acceptability, tradition, methods, technology and availability. Payment systems varied from commodity transfers, physical financial transactions (traditional payment systems) to virtual payment transactions (electronic payment systems). Electronic payment systems have also taken various forms in varying environments and societies. This chapter provides a general overview on various electronic payment systems, focusing developing countries and tried to relate electronic payment systems as an enabler of financial empowerment. In this context, this chapter reiterated that by raising economic activities via electronic means, as a component of e-commerce, could enhance the electronic governance system of a country. It has also put forward available issues, challenges, methods and tools needed to implement electronic payment systems, especially focusing to developing countries.*

### INTRODUCTION

Electronic commerce and its related services over the Internet could be the engines that improve economic well-being of a nation through liberalization of local services, rapid integration into globalization, and leap-frogging through evolved

technology. As electronic commerce, from its very inception, integrates the domestic and global markets by negotiating on trade issues in more elaborated ways, it demand re-investigation of key domestic policies, specifically in telecommunications, financial systems, and distribution and delivery mechanisms of a nation. These

sectors are considered as intrinsic factors to the development of a modern economy. Liberalization of policies will rebound to greater economic welfare than restriction in more narrowly focused sectors. Thus, the e-commerce wave can act as a powerful force to erode domestic barriers that have slowed the liberalization of this sector in many countries (Mann, 2000)

Among various aspects of electronic commerce, its operational complexity and inherited characteristics of network externalities are the two prime features that are hindering its implementation. More specifically, the complexities of negotiations require cooperative efforts among operators inside and outside their countries through national and regional platforms. These processes demand policy upgradation at the local level, including the regional contexts, such as following WTO charters. Secondly, by nature, electronic commerce is characterized by network externalities and developing countries rather by not taking advantage of the technical leadership coming out of the private sector are mostly lagging behind. In this respect, Mann (2000) indicated that network externalities and interoperable standards are key in maximizing the benefits of e-commerce. Moreover, developing countries should not try to develop domestic standards. Adopting the old technique of import substitution to develop a domestic industry is even more economically wasteful in the context of the Internet and electronic commerce. They would be benefited more, if they could localize the globally available successful policies, rules and techniques fitting into their national contexts.

However, development of e-commerce in developing countries is not only restricted by local policy and financial laws, but also compounded by many visible and invisible impediments; such as infrastructure, consumers' habit, local culture, trust, awareness, security, and many other issues. The situation aggravates further, when specific issues on electronic payment systems come into focus for enhancing economic activities of developing nations to foster their economic growth.

The electronic payments networks that are available in many countries, are created mainly by the initiatives of private entrepreneurs, such as the issuing and acquiring agencies of corporate debit/credit card systems. In fact, these are ever innovative systems, which connect buyers, sellers, the banking system and other specialized operators like, card issuers and processors. However, the evolution of such networks demands better technologies to offer growing efficiency and security, convenience and value creation, consumer empowerment and greater transparency in the fees, including standardization and regulation (Hnatyuk, Marur & Patrzalek, 2001; Mazzi, 2006).

In recent years, the widespread adoption of digital payment systems is rapidly expanding the sales volume of goods and services, and reducing the barriers of immediate credit and liquidity and the geographic boundaries to trade and exchange. Therefore, huge amount of data traffic is flowing across localities, nations and regions, demanding incorporation of efficient data handling mechanisms. The statistics data confirms that the volumes of the transactions carried out through credit and debit cards are at a very high rhythm, and the cards are more frequently used as efficient payment tool incorporating data mining techniques for the cross-border transactions. Adopting EMV<sup>1</sup> standards, the payment cards are becoming more secure and 'intelligent' and are going to exploit the microchip technology. The microchip card, created mainly in order to reduce the frauds, also allows the development of new multiple functions that are going to transform the card concept and are heavily changing the daily consumers' usage of these payment tools. Furthermore, globalization of the banking and financial institution through enhanced market competitiveness with more evolutionary services have generated both the birth of new actors and the improved specialization of the old operators (Mazzi, 2006). As long as growths of e-commerce continue, electronic payment systems will prosper,

22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/electronic-payment-systems-developing-countries/29068](http://www.igi-global.com/chapter/electronic-payment-systems-developing-countries/29068)

## Related Content

---

### Transmission Control Protocol for Mobile Ad Hoc Network

Sukant Kishoro Bisoyand Prasant Kumar Pattnaik (2016). *Research Advances in the Integration of Big Data and Smart Computing* (pp. 22-49).

[www.irma-international.org/chapter/transmission-control-protocol-for-mobile-ad-hoc-network/139394](http://www.irma-international.org/chapter/transmission-control-protocol-for-mobile-ad-hoc-network/139394)

### Serialized Co-Training-Based Recognition of Medicine Names for Patent Mining and Retrieval

Na Dengand Caiquan Xiong (2020). *International Journal of Data Warehousing and Mining* (pp. 87-107).

[www.irma-international.org/article/serialized-co-training-based-recognition-of-medicine-names-for-patent-mining-and-retrieval/256164](http://www.irma-international.org/article/serialized-co-training-based-recognition-of-medicine-names-for-patent-mining-and-retrieval/256164)

### Coronavirus Pandemic (COVID-19): Emotional Toll Analysis on Twitter

Jalal S. Alowibdi, Abdulrahman A. Alshdadi, Ali Daud, Mohamed M. Dessoukyand Essa Ali Alhazmi (2022). *Research Anthology on Implementing Sentiment Analysis Across Multiple Disciplines* (pp. 1761-1782).

[www.irma-international.org/chapter/coronavirus-pandemic-covid-19/308574](http://www.irma-international.org/chapter/coronavirus-pandemic-covid-19/308574)

### Preference-Based Frequent Pattern Mining

Moonjung Cho, Jian Pei, Haixun Wangand Wei Wang (2005). *International Journal of Data Warehousing and Mining* (pp. 56-77).

[www.irma-international.org/article/preference-based-frequent-pattern-mining/1759](http://www.irma-international.org/article/preference-based-frequent-pattern-mining/1759)

### Fusion Cubes: Towards Self-Service Business Intelligence

Alberto Abelló, Jérôme Darmont, Lorena Etcheverry, Matteo Golfarelli, Jose-Norberto Mazón, Felix Naumann, Torben Pedersen, Stefano Bach Rizzi, Juan Trujillo, Panos Vassiliadisand Gottfried Vossen (2013). *International Journal of Data Warehousing and Mining* (pp. 66-88).

[www.irma-international.org/article/fusion-cubes-towards-self-service/78287](http://www.irma-international.org/article/fusion-cubes-towards-self-service/78287)