

## Chapter 108

# New Perspectives of Mobile Payment Platform for Developing Countries

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### ABSTRACT

*Mobile phones have become substantially more popular and sophisticated as African consumers have become remarkably comfortable with their use. This chapter shows the impact of the growing adoption of mobile payments as a financial transaction medium for money transfer, retail payments, or micropayments in Africa. Adoption was slow due to the nature of the mobile technology supporting the concept. The author shows how these innovations will continue to improve the quality of life of Africans, especially those in rural areas. He presents M-Pesa as a mobile payment system, which has had great success in Kenya. The author identifies the fundamental principles of success; thus, this enables the author to create an ECOPAY platform, which is an innovative mobile payment platform for emerging markets. The platform provides different types of m-payment like as B2C, B2B, or P2P using the mobile phone or others devices. Each transaction is secure by using encrypted messages and encrypted connections between the devices and the ECOPAY servers. The solution is based on the social and technological environment in developing countries.*

### INTRODUCTION

Mobile phones have transformed telephony profoundly. They are equipped with functionalities which surpass telephony needs, and which inspire the development of value-added mobile services (Tomi Dahlberg et al., 2007). Mobile handsets are in an excellent position to become the primary digital channel for providers of banking and re-

lated financial services in emerging markets. The number of mobile subscriptions in use worldwide, both pre-paid and post-paid, has grown from fewer than 1 billion in 2000 to over 6 billion now, of which nearly 5 billion are in developing countries (Kevin Donovan, 2012). In this context, african banks and telecom operators have started to integrate their development strategies in achieving the technological infrastructure including: mo-

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mobile payment, also called the M-Payment. This technology offers new perspectives in Africa in the field of trade in goods and services. Mobile payments are payments for goods, services, and bills with a mobile device (such as a mobile phone, smart-phone, or personal digital assistant (PDA)) by taking advantage of wireless and other communication technologies (Sandy Shen, 2012). It will continue to take their share of cashless payments for various reasons in Africa (Wondwossen Taddess & Tsegai Kidan, 2005).

The aim of this paper is to propose an analysis of this new service in the African context and to understand what the principles behind the success of these M-payment projects are. Secondly, we present our mobile payment solution called EcoPay (Nana Mbinkeu, 2013) which take into account the social and technological environment in developing countries.

The chapter starts with a brief discussion about M-payment in Africa and opportunities. We study the successful case of the mobile payment platform called M-Pesa and consequently we derive the basic principles of m-payment projects. Then, we study different business models related to m-payment and we propose our own m-payment model with its ecosystem. We show the general ECOPAY platform and its innovations in terms of user services, followed by conclusions.

## **Mobile Payment in Africa**

The main components of the mobile payment system are the money transfer applications and network infrastructure. Banks, mobile operators, trusted third parties are the main players in mobile payment platforms (Kevin Donovan., 2012). People will probably be more likely to make financial transactions through M-Payment solutions without opening or using a bank account. Therefore this technology resolves a problem of low banking penetration in Africa (Kevin Donovan, 2012; Olu Agunloye, 2010; Wondwossen Taddesse & Tsegai Kidan, 2005). The development of this new

electronic payment method is closely related to the evolution of information technologies, telecommunications and high mobile phone penetration in the daily lives of Africans. It eases the adoption of M-payment in Africa and encourages banks to create new services for users directly accessible on mobile phones. It is M-Banking.

With the M-Banking, the user accesses several services including account balances, viewing account history and makes financial transactions. One of the features of M-Banking is the ability to rapidly deal with suspicious transactions (credit card stolen) even when they are miles away from their nearest branch.

As for the M-Payment, it offers several services such as, telephone recharges, bill payments, retail payments and more. The advantage of M-Payment is the fact that several functions work with both traditional mobile phones and smartphones.

The basic premise is that mobile payments offer a way for people with low incomes or the unbanked to make financial transactions without getting involved with a traditional financial institution (Alliance For Financial Inclusion, 2010; Kevin Donovan, 2012; Wondwossen Taddesse & Tsegai Kidan, 2005). The M-Payment is more advantageous to rural populations (Kevin Donovan, 2012; Olu Agunloye, 2010; Wondwossen Taddesse & Tsegai Kidan, 2005). This technology will create competition with older money transfer companies and this will continue to reduce the transfer rates between cities and rural areas in Africa. Africans will benefit from local services with relatively low transaction costs, easier accessibility to financial services. The time savings are immeasurable by reducing the movement of people especially those located in inaccessible areas. M-payment offers several advantages including simplicity and accessibility to the service at any time. This will lead to poverty reduction (Kevin Donovan, 2012; Olu Agunloye, 2010; Wondwossen Taddesse & Tsegai Kidan, 2005).

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