

Exploring the Future of Mobile Payment in China: Analysis

THE INITIAL INTENTION

Mobile Commerce, which is also referred to as M-Commerce, or U-Commerce, on the account of the present variety of services it provides, offers the capacity to carry out commercial activities, by means of using a mobile apparatus such as a mobile phone, PDA, smart-phone and other up-and-coming mobile gadgets. The United Kingdom Mobile Commerce may be defined as a commercial operation that entails the reassignment of possession or privileges to make use of goods and services, which may be set off and/or accomplished by means of portable access to computer-arbitrated networks aided by an electronic contrivance.

The world witnessed the earliest form of mobile commerce in 1997 when two cell phone-compliant Coca Cola vending machines were set up in Helsinki, Finland. They made use of SMS services to make the payments for vending machine transactions. The same year the earliest mobile phone-enabled banking service was initiated by the Merita bank, based in Finland. This service was also based on text messaging technology. In the following year, the earliest digital content sales were downloads to mobile phones, which were commercial downloadable ringtones sold in Finland by Radionlinja (Okazaki 714-715).

Mobile devices, such as PDAs and cellular phones, have gained huge popularity over the past two decades in the United Kingdom. It reached the level at which one of the strategic goals is to adopt m-commerce as a resourceful way of getting close to the customer base and interacting with the clientele. Even though most technological trends and progressions are usually confined to the Asian region and to some extent in Europe, countries like Canada and the United States have also started to adopt and apply m-commerce. M-commerce is at a very early phase of development in a lot of countries.

In the United Kingdom, the target customers belonging to 13-25 age groups are likely to provide an impetus to the preliminary growth phase. Development of mobile products and services like ringtones, mobile games, and graphics displays the potential to dislodge consumption of several long-established youth products, for example, music, fashion, and movies. The tendency to offer goods for youngsters would drastically alter the kinetics of all optical entertainment and goods/service circulation across the planet, which means that vendors could reach consumers with a varied assortment of approaches. The youth-dominated market sections are used to exhibit trends to express viral growth and products oriented on the above-mentioned markets. The youth-dominated market will soon achieve recognition in the general markets as well. While promising market sections are emerging as an ultimate solution for maintaining revenue figures regardless of the average price drops per unit (ARPU), experts in the given field state that the fast-paced commercialization of 3G utilities might herald newfangled prospects in the developed market arena. To take advantage of the m-commerce market potential, various business giants are collaborating to formulate WAP-enabled concepts and means to access them (Chen 1019-1031).

With the advent of mobile commerce a wide range of products and services are being offered today, which opened up different avenues. Using mobile ticketing options, tickets can be easily issued to clients by directly sending them to their mobile phones by means of the variable technologies the given phone may possess (SMS, E-mail, and MMS). Clients are subsequently capable of making use of their tickets right away by showing their phones at the ticket checkpoint. Tickets may be reserved and invalidated on a mobile platform by means of straightforward application downloads or by logging on to WAP portals of different travel agencies and service providers.

Another important form of m-Commerce in the United Kingdom is digital content purchase and delivery. At present, mobile-related digital content purchase and delivery markets are primarily constituted by such products as ring-tones, mobile graphics, and games for cell phones. Contrasting with the services accessed through a home PC, the location of the consumers is sometimes a vital aspect that is exploited in mobile commerce activities. Being aware of the location of the consumer enables service providers to offer location based services like maps, local offers, weather, and monitoring/ tracking services. A wide range of info services may be delivered to mobile customer in a similar way as it was done in case of PC users. Such services may consist of news updates, dynamic stock data records, sports news, financial updates and traffic information. Banking institutions and other financial establishments have also started experiments with the implementation of mobile commerce to facilitate their clients with not only access to their personal account information, but also an easy transaction process, e.g. stock acquisitions, money transfer, by means of mobile phones and other various mobile devices.

Services of this sort are referred to as Mobile Banking or M-Banking. Stock market services made available by the use of mobile equipment also become increasingly interesting to a wide range of consumers, and are often referred to as Mobile Brokerage. In the very recent past, mobile reverse auction solutions have emerged as a novel concept (McMillan 756-757). There is also an alternative to a usual auction. The alternative is called reverse auction process, regularly known as low-bid auction, and it charges the clients' cellular phones directly whenever they decide to place a bid. Apart from these avenues, Mobile marketing is also an emerging M-Commerce concept, but the pace with which it's developing and being implemented is extraordinary. Mobile marketing is an extremely receptive form of marketing operation, particularly from the brands' experience viewpoint. It is

reasonable to mark that nearly all brands are experiencing greater campaign response rates proving the productivity of the concept (Au and Kauffman 84-102). In light of the rapid growth of M-commerce in the United Kingdom and the wide range of opportunities it offers, mobile payment schemes have assumed an immense significance in the commercial markets being the subject of study of the given paper, particularly from the UK perspective.

MOBILE PAYMENT

Mobile payment is a promising, innovative and fast growing alternative payment system with particular implementation being observed in parts of Asia and to some extent in Europe. Rather than paying in cash, with checks or by using credit cards, a customer may simply use his or her cellular phone to pay for a wide variety of products and digital services. The latter can include music, videos, mobile ringtones, mobile gaming subscription or articles, graphics, transportation charges for buses, subways or rail travel, parking meters and other utility services; books, periodicals, tickets and other various items.

The entire market for the various forms of mobile payments taken collectively is likely to become an industry of \$600B revenue worldwide by 2013, while the mobile payment industry for products and services, not including contactless NFC transactions and money transfers, is projected to go beyond the \$300B mark internationally by the same time. A number of mobile payment initiatives are also used in developing economies for micropayment procedures (Dahlberg 56-79).

PREMIUM SMS-BASED TRANSACTIONAL PAYMENTS

Specifically for this method of mobile payment, the users issue a payment request by means of a text message using a predetermined code; a payment charge is billed

directly to their mobile phones. The payment information is transferred to the vendor concerned, and after a successful payment, the vendor dispatches the product, which has been paid for. Most often, these products are digital contents and the vendors respond via a Multimedia Messaging Service to distribute the product bought. Sometimes barcodes, which can be scanned, are delivered through MMS technologies and these are used as electronic tickets for admission to particular locations and events or to procure material products. This method of payments was well accepted in various parts of the world, but is currently being surpassed by other payment modes like mobile web payments (WAP) and Direct Mobile Billing on account of the issues mentioned below.

Poor reliability is often the major concern. Payments can often be unsuccessful with messages being undelivered. Slow speed also matters, for messages delivery may be delayed due to bandwidth availability, and, thus, it can be time consuming. Customers require speedy transactions and don't want to be kept waiting too long. In addition, the cost is often too high – there are a lot of high expenses related to this mode of payment. The cost of formulating predetermined codes and charges for the distribution of media by means of a Multimedia Messaging Service and the consequential client support overheads; these are some of them:

- low payout rates: machinists are familiar with elevated price of in-service and sustaining transactional payment methods that in turn results in the reimbursement rates as minimal 30% for the dealers;
- low follow-on sales: after a payment is sent and the product is procured, there is nothing else for the purchaser to do. It is hard for them to retain purchase information, making it difficult to remember how to make a recurrent purchase (Jarvenpaa and Lang 7-23).

DIRECT MOBILE BILLING

In this mode of payment, the client uses the mobile billing selection in the course of a checkout process at an e-commerce web location, like an online game portal, in order to confirm the payment process in the United Kingdom. Following a two-factor verification protocol consisting of a PIN and One-Time-Password, the client's mobile phone account is billed for the acquisition of any product. It is an effective alternative payment mode that is free of the hassles of credit/debit cards or registration processes with online payment method providers, for example PayPal, thus, sidestepping banking procedures. This ubiquitous mode of mobile payment method, also well-accepted in Asia, offers the following advantages: security: two-factor authentication protocol and risk management procedures to put off fraudulent activities; convenience: no tiresome registration processes and no additional mobile utilities are necessary; ease: It's a simple substitute for a checkout procedure; speed: practically on all stages, transactions are completed in no more than 10 seconds; establishment: a vast majority of all digital content sold online support Direct Mobile Billing payment modes in Asia (Musa 213-224).

MOBIEE WEB PAYMENTS (WAP)

In this form of payment, the client uses the webpage presented or supplementary software that has been downloaded and configured on the client's mobile device to enable payment-making processes. It demands the use of WAP (Wireless Application Protocol) as the principal technology, and, thus, accedes to all the benefits and shortcomings of the WAP technology. However, using a well-known web payment form provides numerous advantages:

- Follow-on sales: Wherein the mobile web payment can be retraced to a certain provider or to other products, the client may be interested and feel like

learning more about the device. The webpage is linked to a particular URL enabling to be bookmarked, making it simple to re-access or refer to others;

- High customer satisfaction: Due to convenient and reliable payment structures;
- Ease of use: Due to a recognizable set of online payment models;
- Quite a few dissimilar actual payment methods can be employed with the help of the constant group of web pages (Valcourt, Robert, and Beaulieu 29-30);
- Direct operator billing: A straight link to the operator billing structure necessitates assimilation with the operator services, but at the same time offers several advantages: simplicity - the providers already have a billing format initiated with respect to each individual client; immediate payments satisfy every single demand of the consumers; precise responses that demonstrate payment status and explanation for failure of payment processes; security to safeguard payment information and checking the customer's identity to prevent fraud; superior conversion rates due to simple click-to-buy option with no requirement for providing any additional payment information; reliability that generates confidence and trust amongst consumers; lessened customer support overheads for vendors and providers; high payout rates;
- Credit Card: A clear mobile web payment scheme may also involve a credit card payment module facilitating a customer with the option to provide their card information in order to purchase products they like. This procedure is very common although any provision of information through a mobile device has proved to decrease the success rate (conversion) of payment processes. Additionally, if the retailer involved using a specific set of data, they can

recognize purchasers, the card information can be re-fetched for future transactions, making credit card payments, a straightforward one-time entry and future sole click-to-buy process, enabling better conversion rates for further purchase activities in the United Kingdom;

- Online: Online companies like PayPal, Amazon Payments and Google Checkout also provide mobile options for checkouts. This process requires the consumers to authenticate with an individual PIN prior to making any payment. Succeeding payment processes also necessitate a PIN code to be drawn. However, such options are known to decrease the success rate (conversion) for payment procedures. Nevertheless, such systems may be assimilated directly or can be merged with the provider services and credit card payments structures by means of an integrated mobile web payment model (Malloy 351-374).

CONTRACTLESS NFC (NEAR FIELD COMMUNICATION)

NFC is employed generally in payment processes in relation to purchases made in material product stores or purchases of transport services. A customer makes use of a mobile device equipped with a special smartcard, to wave it in front of a reader device. Most deals do not need validation, although some transactions necessitate authentication via a PIN code, for the transaction to be completed successfully. The payment amount is then to be subtracted from a pre-paid account or billed directly to the customer's mobile phone account or debited to the bank account.

Mobile payment mode through NFC triggers major challenges in terms of extensive and rapid implementation. Although a number of phone companies and banking institutions are passionate about NFC, other lack the impetus because of

insufficient infrastructure, comprehensive issues of stakeholders, and compliance standards in the UK.

A number of NFC enabled merchants, particularly, in some parts of Europe, draw on the Contactless payment through mobile services to make payments for parking facilities in specifically defined regions. Parking supervisors can put into effect the parking guidelines by using license numbers, transponder codes or barcode labels. The users gain from the expediency of facilities to compensate for parking services easily from their car through their mobile phones. This will also spare the parking service providers certain troubles as well.

NFC-compliant payment systems are much simpler and less expensive to operate as compared to cash transactions and other conventional payment structures. In addition, as an extra benefit, users have a well-documented record of all payments made unlike cash transactions, which are difficult to keep the track of (Hassinen 165-177).

AIM

A number of experts in the field believe that mobile payments is the next technological revolution that has the potential to effectively supplement existing electronic and mobile commercial activities, and can open up new avenues in the world of mobile business. In the light of such circumstances, this paper aims at exploring the prospects of mobile payment; it analyzes the phase it undergoes at present, particularly, in relation to the United Kingdom.

OBJECTIVE

The main objectives of the research can be summarized as follows: to understand and explain implementation rates and the state of mobile payments in the UK; to

analyze implementation rates and the state of mobile payments in UK; to study the adoption rates, drivers and barriers of mobile payments in UK; to recommend the way to come up with the ways that can improve adoption rates and enhance the state of mobile payments in UK.

RESEARCH QUESTION

The research question that this paper aims at answering is to what extent the implementation of mobile payment infrastructure has been effective in UK in terms of its relevance to mobile commerce, drivers and barriers it is exposed to in the process.

HYPOTHESIS

Mobile payment is believed to be a major technological revolution. It holds the potential to effectively enhance existing e-/ m-commerce structures in the UK. The mobile payments hold immense possibilities for all parties/entities involved in the long term, but at present it is on an early development stage and needs a great deal of care and attention. Various approaches have been tried by different entities and the existing requirements have been attempted to be addressed, but until now no uniform solution exists.

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