ABSTRACT

When individuals and businesses conduct transactions electronically over a network using mobile devices, they have participated in mobile e-commerce. It is acknowledged that the Internet is playing an important role in our daily life. The Internet has become a vehicle for services rather than just a static repository of information. Airline booking and hotel booking are examples of these services. Besides the new role of the Internet, we are witnessing rapid progress in wireless and handheld technologies. In this research paper we will discuss about advanced SWOT analysis of m-commerce which will comprise of strengths, weaknesses, Opportunities and threats faced by m-commerce in current scenario. This is followed by a discussion of who is using mobile e-commerce and why they are using it. Information is also presented on how to be successful with mobile e-commerce.

Keywords: M-Commerce; Internet; Strengths; Opportunities; Wireless Communication

INTRODUCTION

The Internet-enabled mobile handset has rapidly achieved worldwide penetration, due to its very personal nature and sophisticated communication technologies. However, unlike e-commerce research, empirical explorations of m-commerce have seen only modest growth, because of the considerable uncertainties involved in mobile research. Mobile electronic commerce, or m-commerce, is defined as the ability to conduct commerce using a mobile device, e.g. a mobile phone (or cell phone), a PDA, or a smart phone, while on the move (Tarasewich, Nickerson, & Warkentin, 2002). Current mobile
Internet applications enable consumers to access a variety of services: Web information search, SMS (short message services), MMS (multimedia message service), banking, buying & selling, payment, gaming, emailing, chat, weather forecast, GPS (global positioning service), and so forth. Collectively, we denominate this wide array of services as “m-commerce.” In a narrow sense, m-commerce can be defined as “any transaction with a monetary value that is conducted via a mobile telecommunications network” [Durlacher 1999]. There, third-generation (3G) and fourth generation (4G) mobile communication systems offer a high degree of commonality of worldwide roaming capability, supporting a wide range of Internet and multimedia applications and services with higher data rates.

Telecom companies are offering new opportunities to users over mobile devices like cellular phones and personal digital assistants. Reading emails and sending SMS messages between cellular phones are becoming natural. We are convinced that the next stage (if we are not already in it) for telecom companies in partnership with businesses is to allow users to buy and sell without being connected to any wired network. Mobile commerce (m-commerce) is the new trend and is expected to drive the future development of e-commerce.

Being able to buy and sell goods/services over mobile devices is an important step towards achieving an anywhere, anytime paradigm. Location and time will no longer constrain people from completing their transactions. Suppose that a person would like to buy a gift for her son’s birthday while she is on a bus. Instead of postponing the errand, she can use her mobile phone to search for the perfect gift. Her search can be narrowed by such criteria as the maximum price she is willing to pay, the desired delivery time, and the age of her son. Software agents are among the components that will have an important role to play in the worldwide spread of m-commerce.

A grid of mobile Internet services classification that employs four primary axes: person-interactive versus machine-interactive, and goal-oriented versus experiential services. This figure is an adapted version of this classification scheme.

<table>
<thead>
<tr>
<th>Person-Interactive</th>
<th>Machine-Interactive</th>
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<tbody>
<tr>
<td><strong>Goal-Oriented</strong></td>
<td><strong>Experiential</strong></td>
</tr>
<tr>
<td>Information</td>
<td>Messaging</td>
</tr>
<tr>
<td>Payment</td>
<td>Gaming</td>
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</tbody>
</table>

Classification of mobile Internet services.

“Person interactivity” occurs between people through a medium, while “machine interactivity” refers to the interaction between people and the medium. In the latter, users can freely modify the content and form of a mediated environment. A goal-oriented process is defined by utilitarian benefits, while an experiential process provides hedonic benefits.

**Process of M-Commerce and Require Adjustment**

M-commerce requires an adjustment to the processes because of the features of wireless communication channels and mobile devices. Communication channels are unwired and suffer from latency and low bandwidth. Devices are also unwired and suffer from low computing resources and small screen sizes. Following is an explanation of the processes that would require adjustment based on the features of m-commerce:

**Attract**: Because users of mobile devices are not attached to any physical location, their location at a specific time can be used to identify the businesses that are in the users’ area and have special offers. Being aware of the users’ interests and preferences ensures that users receive relevant offers according to their profile.
**Interact**: Since mobile devices’ display and keypad are limited in term of size (compared to fixed devices), it is difficult for users to display and browse online catalogues. Potential assistance to users from intelligent components could be very appropriate here.

**Transact**: Since users of mobile devices cannot be constantly connected to the network, they have to go offline. This means that the transaction process has to be undertaken without the direct involvement of users. Intelligent components are needed to follow-up the progress of this process.

**Pay**: When payments are due, the exchange of sensitive information has to be made secure. Specific security protocols and techniques are required and should deal with the characteristics of wireless networks and mobile devices.

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**SWOT Analysis of M-Commerce**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>❖ Convenience</td>
<td>❖ Small screen</td>
</tr>
<tr>
<td>❖ Flexible Accessibility</td>
<td>❖ Limited use of graphics</td>
</tr>
<tr>
<td>❖ Easy Connectivity</td>
<td>❖ Non-uniformity of networks</td>
</tr>
<tr>
<td>❖ Personalization</td>
<td>❖ Tied back to the network</td>
</tr>
<tr>
<td>❖ Time saving</td>
<td>❖ Technology constraints</td>
</tr>
<tr>
<td>❖ No time constraints</td>
<td>❖ Limited bandwidth</td>
</tr>
<tr>
<td>❖ Price/product comparison</td>
<td>❖ Security</td>
</tr>
<tr>
<td>❖ Cost effective</td>
<td>❖ Fake websites</td>
</tr>
<tr>
<td>❖ Direct communication with consumer</td>
<td>❖ Fraud</td>
</tr>
<tr>
<td>❖ Quick feedback</td>
<td>❖ Long delivery timing</td>
</tr>
<tr>
<td>❖ Simple and easier exchange of information</td>
<td>❖ No idea about quality and physical condition of the product</td>
</tr>
<tr>
<td>❖ Faster buying procedure</td>
<td>❖ Lack of personal services</td>
</tr>
<tr>
<td>❖ No physical company set up</td>
<td>❖ More shipping cost</td>
</tr>
<tr>
<td>❖ Easy transactions</td>
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</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
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<tbody>
<tr>
<td>❖ Changing trends</td>
<td>❖ Competitors</td>
</tr>
<tr>
<td>❖ New technologies</td>
<td>❖ Changes in environment, law and regulations</td>
</tr>
<tr>
<td>❖ High availability (24 hour and seven days a week)</td>
<td>❖ Innovation</td>
</tr>
<tr>
<td>❖ Wide business growth</td>
<td>❖ Privacy concerns</td>
</tr>
<tr>
<td>❖ Cut down on local competition</td>
<td>❖ Fraud</td>
</tr>
<tr>
<td>❖ Advertising</td>
<td>❖ Risk</td>
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</table>

**Strengths**

**Convenience**: It is a true convenience to do much from a handy device via M-Commerce. With wherever you are, in just a few clicks on your mobile device, you can already do shopping, banking and download media files.
Flexible Accessibility: User can be access via mobile phones and at the same time be accessible online too through logging on to various mobile messengers like Yahoo and G talk and other networking platforms.

Easy Connectivity: As long as the network signal is available, mobile devices can connect and do commerce transactions, mobile to mobile and even mobile to other devices. No need for modem or WI-FI connectivity set up.

Personalization: Each mobile device is usually dedicated to a specific user, it is personal. You can do whatever you want to your mobile device, modify the wallpaper, change view settings or modify contact information as you send emails or e–payments.

Time saving: It saves time and transportation because there is no need to go anywhere physically.

No time constraints: It can be used any where any time as there is no time constraints.

Price/Product comparison: Helps consumers to compare price and product effectively and efficiently.

Cost effective: Reduces logistical problems and puts a small business on a par with giants.

Direct communication with consumer: Social networking sites, online advertising networks can be mediums to buzz about online store

Quick feedback: Quick feedback and comment forms are main features to interact with customers.

Simple and easier exchange of information: Improves information sharing among merchants and customers and enables prompt quick just in time deliveries.

Faster buying procedure: E-commerce means better and quick customer services. Online customer services make customer happier due to absence of intermediaries for buying products. So buying procedure will be fast and quick.

No physical company set up: Doing e business is cost effective because no physical set up is required for that.

Easy transactions: Financial transactions through electronic fund transfer are very fast and can be done from any part of the world.

Weaknesses

Small screen: The size of the screen of the device may limit the complexity of the application. It may inhibit the consumer from having full access to the website, or it may limit the interaction between the consumer and the page.

Limited use of graphics: The mobile devices may not be able to offer the same level of graphics or processing power of a personal computer. This is limited by the technology that is built into the mobile device.

Non-uniformity of networks: Each network may have a different approach to its version of mobile commerce (Tarasewich, et.al., 2002). What this means for the customer is that his/her actions may be dictated by what network carrier he/she has. Not all network carriers are created equal

Tied back to the network: it is the short interval of time (Andreou, et.al., 2001). This can either be attributed to the short amount of time that customers have to complete their orders, or to the reliability of the network service.

Technology constraints: WAP and SMS limited to small number of characters and Text.

Limited bandwidth: Limited roll out of higher bandwidth mobile networks and devices (i.e. 3g networks and wireless broadband networks are predominantly located in cities).

Security: Security matter confuses customers especially about the integrity of the payment process.
Fake websites: Fake websites can not only disgrace e-commerce but bring bad name to e-commerce also.

Fraud: Concerns about misuse of financial and personal data is a great weakness in e-commerce.

Long delivery timing: Delivery time can be in days or weeks which one cannot wait for.

No idea about quality and physical condition of the product: Online products cannot be touched, wear or sit on the products.

Lack of personal services: Physical products can be available but lack in personal services which are intangible.

More shipping cost: Shipping cost increases if we order online

Opportunities

Changing trends: E-commerce is fast and effective even financial transactions can be made from any part of the world. People of tomorrow will feel more comfortable to buy products through internet only.

New technologies: Daily number of internet users is increasing. People feel more comfortable to shop Online.

High availability (24 hour and seven days a week): Along with each and every click of the mouse business is in operation.

Wide business growth: E business has wide scope and broader vision to grow.

Cut down on local competition: Online customer services are a competitive advantage for the company.

Advertising: Advertising is cost effective as compare to Conventional offline system.

Threats

Competitors: Competition is increasing day by day big companies have already entered in this field. They are making people habitual at the cost of their companies.

Changes in environment, law and regulations: Change in trends, fashion and fad can distress E Commerce side by side change in law and regulations can also affect it.

Innovation: Customers now days are always in a search of innovative products. Innovation can be either in product, place, promotion and even price.

Privacy concerns: Fears that information can be misused lead to spam e-mail or identity fraud.

No direct interaction: In e-commerce there is no direct interaction of customer and the seller. That is why bargaining does not exist. People prefer to buy physically a compare to online.

Fraud: Persons using unfair means to operate e-commerce can damage the confidence and faith of common people.

Risk: Nature of fraud and risk is different because when a customer relies on un seen set up, he trusts and makes transactions. In such a way he is ready to face risk.

CONCLUSION

People are always looking for new ways to make their lives easier. People often look to technology as a tool in the simplification of their lives. The newest technology allows people to access the Internet through their mobile devices. It seems logical for people to want access to the Internet through their mobile devices and to want to take care of their business through these devices. Companies are now able to reach these potential consumers that are always on the move. Now, companies are able to reach those mobile consumers that they may have missed in the past. So both consumers and companies are
benefiting with the advent of this newest form of technology. Consumers must be patient, realizing that along the way there will be bumps in the road. These bumps are caused by the consumers demand for cell phones that allow them to take advantage of m-commerce, and companies trying to ensure that their technology allows m-commerce to work seamlessly. A developing country can be rationalized and mechanized if it introduces m-commerce effectively and efficiently. It will enhance its output and gives competitive advantage. After all, m-commerce is a technology that is supposed to make our lives easier, not cause more headaches.

**What Comes Next?**

Despite the different technologies used for the development of e- and m-commerce applications, the social context has to be part of these applications. This context is needed and reflects the interactions occurring between consumers, providers, and sometimes third parties. However, various aspects that are difficult to assess are missing from the transaction, such as personalized handling, trust, and face-to-face interactions. How do you measure a customer’s trust in a provider she has never met? And, how do you ensure that a customer is satisfied with her order? Online questionnaires and forms can be used, but will they be able to accurately reflect the user’s behavior and feeling after concluding a deal? The need for strategies to address the social as well as technology issues is critical. Can we expect a new generation of commerce systems that will combine both strategies in the same framework? This could pave the way towards the next stage after m-commerce.

**REFERENCES**