1-1-2009

eBusiness Use in the United Arab Emirates: Lessons for Evolving Markets

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[http://aisel.aisnet.org/amcis2009/557](http://aisel.aisnet.org/amcis2009/557)
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ABSTRACT
Since the early 1990’s the United Arab Emirates has been actively seeking to diversify into non-oil sectors. The nation has set out to market itself as a hub for foreign and domestic companies; realizing to achieve these goals that it must provide appropriate e-business frameworks and infrastructures. While the nation itself is paving the way for other nations in the Middle East to undertake electronic business initiatives, the use of everyday e-business in the UAE appears to be somewhat stifled.

An investigation into reasons for the apparent low levels of adoption of e-business by UAE inhabitants has been conducted using an autoethnographic research methodology coupled with qualitative interviews of selected stakeholders. Findings from this research may contribute to a better understanding of how e-business initiatives in specific regions need to take into account local cultural and other issues which may be irrelevant elsewhere.

Keywords  
E-Business, Culture, Language, Middle East.

INTRODUCTION
Although there has been, for a number of years, a concerted effort by the United Arab Emirates to take a prominent role in introducing e-business initiatives throughout the Gulf region, this effort has not translated into widespread use of e-business channels by its own population. The Australian principal author of this paper had been a long standing and prolific user of e-business systems in his own country. However, on his arrival in the UAE, he immediately experienced great difficulties in successfully negotiating the local e-business sites in his attempts to duplicate the sorts of transactions that he had been undertaking in other parts of the world. Initial investigations into the actual local use of e-business channels indicated that there were generally low levels of understanding and subsequent low usage of e-business by the local population.

It was immediately obvious that many of the local e-business systems were difficult to use and, over time, it became apparent that the benefits of using e-business systems was not generally understood by locals. It was believed that the Technology Acceptance Model (TAM), (Davis 1989) would provide a framework that could be used to further examine reasons for the low usage level of this technology.
It was not obvious why, with an infrastructure potentially as good as anywhere else in the world, the actual levels of e-business activity appeared to be so low. The research was subsequently organized into three main areas:

- Infrastructure (including regulatory frameworks)
- Traders
- Consumers

As the research developed the enormity of the task that we had set became apparent. The broad definitions of e-business that we had initially taken from McKay and Marshall (2004) “The use of the Internet and other information technologies to support commerce and improve business performance,”,

was clearly unmanageable in that form. Consequently we restricted our research to business to consumer (B2C) transactions which Jewels and Timbrell (2001) synthesised as “An exchange conducted electronically between producers and end consumers of goods, services and explicit knowledge about goods and services (or information about consumers) for available consumption in return for the actual or potential payment of monies.”

Other than the principal author the research was conducted by dual Arabic/English speaking Middle Eastern based locals who had undertaken an e-Business Strategy, Architecture and Design course as part of their degree program.

RESEARCH BACKGROUND

The original Davis (1989, p320) article simply asked the question “What causes people to accept or reject information technology?” TAM has become one of the most widely applied theoretical models in IS research (Lee, Kozar and Larsen 2003), and has been extended in various forms to cover a range of issues associated with information technology usage. Various researchers have applied extensions to the original TAM model since its original publication in order to better analyse usage patterns. In recently published research Lingyun and Dong (2008), used three extensions to the original model — trust, social presence, and perceived enjoyment, in their examination of B2C user behaviour. Similarly, Al-Khateeb (2007) used perceived internet content as an additional factor while investigating internet usage in two developing countries. Lee's (2009) research on internet banking includes various risk factors as his extension to TAM.

Although Venkatesh, Brown, Maruping and Bala's (2008) model of IS usage behaviour, employing behavioral intention, facilitating conditions, and behavioral expectation as predictors of the three conceptualizations of system use, may have potentially significant influences on the continued popularity of TAM, this research has chosen not to modify the original TAM, preferring to rely on the original two factors, perceived ease of use (PEOU) and perceived usefulness (PU) in order to examine usage patterns of B2C in an evolving region. The TAM model has already been comprehensively validated over various forms of IT usage scenarios. The objective of this research is thus to investigate what issues might be contributing towards the original two factors, PEOU and PU, and as such, sets out neither to validate TAM nor to extend it. Potential effects of infrastructure/frameworks and traders on consumer behaviour will be examined, though the unit of analysis remains as the consumer.

METHODOLOGY

Autoethnography is a type of qualitative research method which, in a form of autobiographical personal narrative, explores the writer's experience of life. Whereas ethnography uses participant observation and interviews in order to gain a deeper understanding of a group's culture, autoethnography focuses on the writer's subjective experience rather than the beliefs and practices of others, (Wikipedia 2009). This autoethnographic research provided a unique opportunity for authors with different backgrounds to provide personal perspectives and to relate their experiences gathered over time. The amalgamation of these perspectives, from local UAE users with relatively little exposure to B2C, but with a better understanding of local customs, with that of an experienced ‘outsider’, but already conditioned to e-business methods and protocols, has allowed the authors to identify factors that may not have been so obvious to either group.
OBSERVATIONS

Infrastructure and Regulations

In February 2000, Dubai’s then ruler, Sheikh Maktoum bin Rashid al-Maktoum issued a decree setting up a free trade zone for electronic commerce and technology. The decree established as an independent body, the Free Zone Authority, operating under the Dubai government, designed to spearhead the UAE’s drive to become a regional centre for electronic commerce, technology and information. At a press conference in September 2000 it was announced by Mohammed al-Gergawi, director general of Dubai Internet City (DIC) that more than 100 IT companies including industry giants Microsoft, Oracle and Compaq had been granted licences to operate in DIC. By 2007 this number had risen to almost 1000 companies indicating the widespread acceptance and success of this initiative.

Dubai Internet City was set up to provide to the nation a world class environment with high bandwidth and low cost and secure high speed support infrastructure. Within a supportive government environment that backed e-business initiatives, business incubators, venture capital funds and e-education programs it provides a gateway to markets in the Middle East, North Africa, the Indian subcontinent and the Commonwealth of Independent States (CIS), covering previous Soviet republics (LowTax.net, 2008).

In 2006 the Ministry of Economy issued two ministerial decisions (114 & 406) to establish a committee to oversee the implementation of the Electronic Commerce and Transactions Act, 2006 and recommended the appointment of a Telecommunications Regulatory Authority of the UAE (TRA) as the authority entrusted with overseeing certification services in the UAE pursuant to Article 20 of the Act. The mission of the Telecommunications Regulatory Authority (TRA) was to “support and enable the Information & Communication Technology (ICT) sector in the UAE by safeguarding competition, providing fair access to the domestic infrastructure, and ensuring the optimal use of natural resources through the implementation of best practice in every area,” (Telecommunications Regulatory Authority 2008). The key objectives of the TRA are to license, monitor, approve, and oversee the activities of Certification Service Providers and to continue providing strategic advice to current and new stakeholders who choose to conduct business on-line, while working towards fulfilling the objectives of Article 3 of the Electronic Commerce and Transactions Act, 2006. Article 3’s objectives include:

1. Protect the rights of persons doing business electronically and determine their obligations.
2. Encourage and facilitate Electronic Transactions and Communications by means of reliable Electronic Records.
3. Facilitate and eliminate barriers to Electronic Commerce and other Electronic Transactions resulting from uncertainties over writing and signature requirements, and promote the development of the legal and business infrastructure necessary to implement secure Electronic Commerce.
4. Facilitate the electronic filing of documents with governmental and non-governmental agencies and departments and promote efficient delivery of the services of such agencies and departments by means of reliable Electronic Communications.
5. Minimize the incidence of forged Electronic Communications, alteration of Communications and fraud in Electronic Commerce and other Electronic Transactions.
7. Promote public confidence in the validity, integrity and reliability of Electronic Transactions, Communications and Records.
8. Promote the growth of Electronic Commerce and other transactions on the national and international level through the use of Electronic Signatures.

(Electronic Commerce and Transactions Act, 2006)

It should also be mentioned that the UAE does not have a traditional postal delivery service nor does it have specific residential addresses in the manner of US or European communities.

Operational Issues (Traders)

Although the infrastructure that has been developed certainly supports a wide usage and support of e-commerce the actual operation of such initiatives may be at odds with the original intention. One interviewee reported that although car registration can be completed on-line, in reality, what happens is that you must attend the Road Transport Authority (RTA) in person and stand in a queue and wait until an employee from the RTA enters the transaction details for you on-line. Another

1A business incubator is a facility designed to help businesses become established and profitable during their start-up phase (Zawya 2005).
Four prominent issues have emerged from this investigation:

One experienced expatriate user reported spending no less than 3 days trying to book an airfare on-line directly through one of the local airlines Web sites. He would get to the stage of confirming his credit card details when the system would merely give an error message stating that the airfare quoted could not be confirmed and would ask him to repeat the operation. Eventually he gave up and decided to book on-line through an Abu Dhabi based travel agency. This new site presented a new range of problems that he could not overcome; one of the passengers that he was attempting to book for was over 65 years of age and when the date of birth was entered, the system responded that the passenger must enter their correct date of birth. Being over 65 apparently classifies you as a senior but unfortunately there was nowhere in the system that allowed you to book a senior ticket. Undaunted, the expatriate still managed to book his tickets on-line, but through the US based Expedia, a process that was successfully completed in less than 10 minutes. We might postulate in such cases that the individual sites have merely not been designed with enough care, but the amount of reported incidents of this type across a broad spectrum of traders may indicate broader implications. Do local traders fully understand the nature of e-business channels and are they that serious about expanding their traditional markets in this direction? For first time e-business users, if their introduction to the world of on-line transactions is not only perceived to be difficult but in reality is either extremely difficult or in some cases impossible to conduct, it may be the last and only time that they attempt to use the medium. In this particular case however, the individual involved, as a veteran user of e-business, attempted two months afterwards to book another ticket through the same airline and was pleasantly surprised when he was able to complete his booking on-line with little difficulty.

There are, however, some UAE sites that appear to be on par with anything available in other parts of the world. The Dubai police portal (Dubai Police 2009) allows users to pay traffic violation fines on-line and even provides photographs of any speeding violations. The Salik system of road tolls used in Dubai is, after the original purchase of a smart card which attaches to the vehicle windscreen, fully maintainable on-line. Operation of this system compares favourably with those from cities such as Singapore, Sydney or London. The Salik system is compulsory if driving in Dubai as there is no alternative method of paying the tolls, although the cards may be renewed physically as well as on-line.

It should be noted that there are some elderly people who are illiterate and would thus find it difficult conducting transactions on-line in any language. Respect for the elderly is so high that if these people suggest that conducting business on-line is unacceptable, it has a great influence on whether e-business is embraced by others. Also, without some external assistance people of all ages find difficulty engaging in e-commerce activities as they simply do not understand how to use computers, and there is little help in teaching them how to do so. Many of the reported e-business users in various surveys are in fact merely playing on-line video games, which tends to skew the data collected by such bodies as the Arab Advisors Group (2007). It has been estimated anecdotally however that significant numbers of people may now use the internet merely to get information about products prior to purchasing items in traditional marketplaces. This would appear to suggest that e-business usage while still at an early stage of evolution, predominantly as content providers providing information to customers in the form of on-line catalogues, is being used by increasing numbers of people. The transactions are however still not being completed on-line.

**FINDINGS**

Four prominent issues have emerged from this investigation:

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Jewels et al E-Business in the UAE
Cultural Issues

The conservative nature of the local Islamic society and the traditional values of UAE inhabitants have combined to curb the pace of acceptance of the sorts of ideas which are likely to be embraced without hesitation by other societies. In their desire to protect their loved ones many parents actively prevent women from using electronic services and there is even concern that telephone numbers may be used ‘inappropriately’. A recent report conducted by the General Command of Abu Dhabi Police (2008), entitled “Internet and networks, and their effects on society and security,” examined both negative and positive effects of mobile technology and its impacts on all segments of society 2. According to this report, the negative impacts of the dissemination of ideas and the promotion of negative beliefs may not be consistent with the beliefs of the community and could lead to Internet addiction and isolation through excessive use.

Many sites which contain images or content considered potentially ‘harmful’ by the UAE’s Internet Access Management Policy are classified as a Prohibited Content Category and are subsequently blocked. Effectively, this action prevents UAE users from accessing what is considered by Turban, King, McKay, Marshall, Lee and Viehland (2008, p104) as the single most profitable B2C model, adult services and products.

Lack of Understanding/Education

In the relatively short time that the Internet has been available in the UAE many people have failed to understand how to use it effectively. There has been no widespread education of the population on the use and benefits of e-business usage although there are widespread e-government services available. Services relating to visa and driver’s license applications, birth and marriage certificates, utility payments, municipality permits and fees, customs declarations and various other basic services are now being provided on-line. A study conducted in 2007 by Madar Research 3, based on a benchmark test standardised by the European Commission, indicated that Dubai had an overall score similar to the United Kingdom, which ranked fourth in the EU in terms of the on-line availability of basic public services.

Yet there appears to be low confidence in the UAE population when conducting e-business themselves. One interviewee, who was himself studying e-business at the time reported an incident when he arrived at Sharjah airport to fly to Saudi Arabia with his sister. When he asked his sister for the air ticket he was told that there was none, “We only have e-tickets.” The brother exploded in rage, “What if the e-ticket doesn’t work? We won’t be able to board” There was of course no problem and his paranoia was unfounded. This incident, however, highlighted how even someone who should have been more confident with on-line transactions could still have grave concerns with the technology until the system is proven to work the first time.

Many traders appear to be building Web sites that seldom have any type of error recovery facilities. When something unexpected happens there is little or no opportunity for a user to recover from the event. This makes using a site difficult and in many cases impossible, even for experienced users. The simple addition of a contact phone number to ring if the medium fails is included in most well established and mature sites. Assuming that something unexpected can never happen is generally the hallmark of inexperienced or naïve web developers.

Mistrust in the electronic medium

According to an annual survey performed by Symantec, 75% of UAE internet users avoid on-line shopping because they believe it is ‘unsafe’ and ‘too risky’, (Smith 2008). In a collectivist society such as the UAE, details of a single incident of internet fraud will promptly and systematically be widely distributed, and this single incident may soon become regarded as the norm. On the other hand, it appears as if reports of successful and regular use of e-business channels are not so eagerly shared with others. One interviewee reported that he attempted once to buy a music CD on-line but was actually on a fake website and lost his money. “Who monitors these kinds of websites,” he asked, “there should be a kind of security institution for tracking that kind of website in order that people could trust e-commerce.” Although he had not been affected by it personally, another interviewee claimed that he knew of Websites that that look similar to another main e-commerce Web site but are fakes. The official website of Dubai Islamic Bank for example was www.alislami.ae but someone had created www.alislami.org to defraud genuine users of the bank. For inexperienced users unfamiliar both with internet protocols and with criminal activity of any sort, a single incident of this type may take on a larger than life perspective. In such a low crime society such as the UAE, it is perfectly normal for individuals to personally carry large sums of cash, the risks of being

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2 This report was published in Arabic and translated into English for this research.
3 Madar Research Arab ICT Use Index
robbed being infinitesimal compared, for example, with many US cities or parts of South Africa. The potential for inhabitants to be robbed by internet scams is thus perceived by them to be higher than in traditional forms of trading. Unlike many other parts of the world this may in fact be a valid assumption, not because there is a greater degree of computer fraud in the UAE but because the amount of other types of crime is so low. From a traders perspective, there is no evidence to suggest that MacGregor and Vrazalic (2007) claim that security concerns are the primary reason for low adoption rates amongst small businesses throughout the world is not still valid in the UAE.

Security solutions provider Symantec stated in an annual survey that of those UAE residents who do perform transactions online a supposed 78% do so without any security systems in place, … demonstrating a lack of willingness on the part of the consumer to be pro-active when it comes to protecting themselves from on-line hackers, even though there are a number of easy to install security systems available,” Karen Kapur, VP of retail banking group Masreqbank, who have provided what they consider as a secure on-line environment, was quoted as believing that e-Business merchants themselves need to provide a secure environment for their customers in UAE. “It is a two way thing. Merchants need to educate users about the security and features of the channel, highlighting the joint responsibilities of both the user and the provider.”

Language & Regional Factors

Although English is widely spoken and recognised as the language of international business, the official language of the UAE is still Arabic and this is the primary language of communication by the local population. Although it would seem so obvious, the language used must be an extremely important factor in the perception of ease of use of websites. According to web information company www.alexa.com the top Web site in the UAE is an Arabic version of Google. The highest ranked site that might be classified as e-Business is in 12th position, www.Emirates.com (dual language) with global leading trading sites www.eBay.com and www.Amazon.com neither of which has an Arabic version, not one of the top 100 sites in the UAE.

Providing insight into the difficulties faced by all UAE e-business users one British expatriate explained in a blog (Smith 2008), that although she shops on-line in the UK all the time, she never does so in Dubai. “It has nothing to do with internet security, but simply the ability to deliver [goods]”. Another blogger commented, “I used to do a lot of shopping on-line when I lived in the UK and Australia but since coming here over 3 years ago I have never had one package delivered (and that includes standard letters and mail from home). This is so much more of an issue than the security which I think is actually very good these days anyway.”

CONCLUSIONS

Davis’ (1989) Technology Acceptance Model (TAM) suggests that a users’ decisions to accept new information technology is based on two rational assessments of its expected outcomes:

(a) perceived usefulness (PU), defined as the expectation that using a new information technology could result in improved job performance, and (b) perceived ease of use (PEOU), defined as the degree to which a person believes that using a particular system would be free of effort.

Perceived Usefulness (PU)

A lack of understanding of the benefits of e-business contributes to a misunderstanding of the usefulness of such a medium. Because there is a perception that the medium is unsafe (or at least not as safe as traditional channels) the usefulness of e-business is questioned. In such a conservative society changes from the traditional way of doing things can only usually be made if there is overwhelming evidence to support that change. At this time although the strategic initiatives associated with e-business appear to be working effectively, the tactical and operational measures are not providing overwhelming evidence of the usefulness of the medium.

Perceived Ease of Use (PEOU)

The difficulties experienced by users in conducting transactions on poorly designed sites which have no error correcting facility ensures that users, at the very least, perceive that the system is difficult to use. Not being able to conduct transactions in your native language obviously makes any system more difficult to use than if it was in your own language. A general population not being trained in internet protocols contributes to systems being considered difficult to use.

Findings from this research strongly indicate that these two factors contributing to usage are indeed present in the UAE environment. Better understanding of local factors prevalent in particular regions and the adaptation of e-business channels to local conditions would appear likely to increase the uptake of e-business use.
REFERENCES


