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**ELECTRONIC COMMERCE IN LEBANON**

by

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## Executive Summary

The objective of this study is to explore the status of e-commerce in Lebanon through investigations targeting businesses, consumers, and the public sector. Doing so garners insightful recommendations to help Lebanon further engage and participate in e-commerce and to align the country with developed countries as a player in the global economy. Data was collected from over 15 companies and key individuals in Lebanon using semi-structured interviews. Interview data was triangulated with other sources and included in this study.

Electronic (E-)commerce is playing a major role in the globalization of world economy, creating a revolutionary new way to do business by diminishing distances and bringing companies closer to their distribution markets. To be able to integrate smoothly into the global marketplace, ESCWA countries have to make a major leap in the standards they adopt, procedures they use, and skills they acquire from both local businesses and governments.

E-commerce in Lebanon is in an early stage. Some e-commerce ventures have been established, and new ones are starting to appear. However, e-commerce still lacks the Lebanese public endorsement from consumers, who usually give thrust to e-business.

Several factors affect the status of e-commerce in Lebanon; one of which is the telecommunication infrastructure. During the 1990's, the government established an excellent telephone network infrastructure throughout the Lebanese territory. The network is extremely reliable, exceeding one million land lines, and is adequate for the initial stages of e-commerce. However, it will soon be outdated without proper upgrade. Attempts to regulate and use cable for internet use have failed so far. The MPT has recently introduced ISDN in Lebanon to be operational before the end of 2000. ISPs in Lebanon do not have local interconnection. Lebanon lacks a network operations center to coordinate Internet traffic and avoid bottlenecks. High cost of telecommunications is another major obstacle for e-commerce development in Lebanon. The fierce competition among ISPs and the arrival of international ISPs to Lebanon has signaled fast Internet connection to Lebanese users and established more affordable access fees.

ISPs play a major role in e-commerce. The local ISP price war has cut rates and produced better service to consumers. It has also forced some smaller ISPs to fold. The increase in cyber-traffic has required higher investments in hardware, bandwidth and personnel. In general, all operating ISPs in Lebanon charge adequate fees to consumers that are comparable to their United States counterparts. However, the quality of service may not always be the same. With the absence of a cable network, which can reach data transfer speeds more than 45 times what the best dial-up connection can provide, companies resort to more expensive microwave connections to acquire similar high-speeds. The price of microwave service, however, remains exorbitantly high and has discouraged potential subscribers from enlisting. ISPs in Lebanon charge relatively high fees for hosting services that is pushing Lebanese sites to prefer to be hosted in the United States. As one of the first countries in the Middle East to establish online presence and resulting knowledge,

Lebanese companies have become exporters of ISP setup expertise, particularly in Saudi Arabia and Egypt.

Lebanon still maintains a government monopoly on the telecommunication sector, except for the mobile phone sector that is currently in disaccord with the government. Privatization of the telecommunication industry, as it is happening across the globe, would increase the competitiveness of the market, reducing prices and providing better service to customers.

While access to e-commerce through personal computers is important, other companies in Lebanon are concentrating on preparing for the new wave of information access through mobile phones. One mobile phone operator is studying the Internet market to align itself with its business group's expansion strategy; it wants to provide mobile and Internet access to the local market and, by the end of the year, become a major player in the Internet business. Moreover, this company is implementing a three-month pilot project to investigate the impact of mobile commerce (m-commerce) and to evaluate consumer behavior, bearing in mind that not too many mobiles support WAP at present. Two WAP portals have already been launched in Lebanon by Q3 of 2000. Information such as news, finance, horoscope, and search engine services, and movie theatre purchasing are offered for the Lebanese public. It is estimated that approximately 2000 WAP-enabled mobile phones exist in the Lebanese market today and that all mobile phones will migrate to being WAP-enabled within three years. Given the 650,000 mobile lines used in Lebanon and assuming that at least 50% of these mobile phone customers will become WAP users, the mobile e-commerce (m-commerce) potential client base will reach a comfortable 325,000 customers within three years. In contrast, computer Internet accounts have reached 100,000 since its inception in 1995.

Software development companies are aware of the growing need to create and support software products that facilitate e-commerce. Some companies are migrating their existing applications to web-based applications. By doing so, their clients also migrate to the new platform, increasing awareness and traffic on the Internet. Other newcomers, inspired with fresh concepts, are creating web-based applications only, such as Internet malls, auction sites and pure content sites. Being leaders in web development in the Middle East, Lebanese web development companies have polished their expertise to export their skills to the surrounding countries. They were instrumental in helping companies in Syria, Egypt and the Kingdom of Saudi Arabia set up their services, for example, as well as expand to the European continent.

Even though Lebanon has a good base of information technology (IT) specialists, the field still needs enhancement. While IT specialists are technically very good, they lack management expertise, particularly for large-scale software development projects. Moreover, keeping talented recruits on board for the long term is a challenge for Lebanese companies.

Today the major hinder in the way of Internet and e-commerce in Lebanon is lack of computer literacy and Internet awareness. This is especially evident with the senior management of Lebanese companies who did not have a chance to exercise structured continuing education. While the government has introduced computer

literacy courses in its new curriculum for K-12, it is lacking a clear plan to integrate and involve the educational sector in popularizing the Internet. It is worth noting that the private sector has been active in playing its part of creating awareness in our society for business reasons as well as for philanthropic goals.

Online banking has a very promising future in Lebanon, partly because of the rich expatriate market and because banks have substantial cash flow to finance large-scale projects. Some banks have started their own online banking ventures, providing a great added-value service for Lebanese expatriates. Business-to-business e-commerce procedures are still bureaucratic even though banks have introduced services to facilitate and guarantee e-commerce transactions. As of September 1999, the number of credit card issued by Lebanese banks was 228,000, an increase of 53% from the year before. Until electronic cash becomes widespread and m-commerce is widely acceptable, credit cards remain the most acceptable form of online payment. Numerous initiatives have advertised credit card services and informed customers of card advantages.

It takes huge investments before reaping commercial benefits. Until measures are taken to release investment capital into the market and to establish viable investment mechanisms, e-commerce in Lebanon will be restricted to actions of individual entrepreneurs and will not enter the mass stage witnessed in the West. A few Internet incubators are starting to appear in Lebanon. An average venture capital company may start with \$5 million divided into 10 or 15 projects with an average \$250,000 funding per project.

The lack of confidence in e-business in Lebanon is reflected in fear of non-delivery of goods, theft and fraud of credit card numbers. As long as e-awareness is not conducted aggressively and the private and public sectors do not establish e-commerce regulations and provide consumer security, the trust issue will be a major hindrance to online shopping. Consumers must be able to rely on procedures that will allow them to raise claims against businesses on grounds of poor product quality and non-delivery of goods.

Legal frameworks are designed for users to rely on the validity of transactions and to engage in secure and reliable electronic communications. Legal frameworks are imperative to a flourishing e-commerce initiative. Lebanon is making an effort to enforce Intellectual Property Protection in conformity with WTO and WIPO agreements. The Lebanese Copyright Law of 3 May 1999 updates the national protection of copyright and neighboring rights to new technologies and recognizes software as a copyright-protected work. Draft legislation related to the Evidential Law in Lebanon was submitted to the Council of Ministers to recognize electronic documents as equivalent to those in handwritten form and accepts them as evidence in legal proceedings. It also recognizes electronic signatures. A special interest group is working on a draft law to provide official accreditation to Certification Authorities (CAs) and to give the government regulatory authority over them. Lebanon has seven commercial registries that issue trademarks with no examining entity to supervise them. Until a central agency is established to control the application of intellectual property rights and trademarks, players of the e-commerce market may experience violations of their business designs and trademarks.

Due to the small number of Internet users in Lebanon, the Lebanese e-commerce market is very limited. The e-commerce projects are focusing on exporting goods and services from Lebanon rather than becoming pure consumer projects catering for local markets. The business-to-business sector of e-commerce in Lebanon is more active than business-to-consumer. Some companies have established themselves as infrastructure providers for electronic ordering and electronic transaction processing in the business-to-business domain. Some of them electronically link a number of large wholesalers to retailers. Manufacturers also engage in business-to-business e-commerce, especially those with product exports to the United States and Canada, France, Brazil, and the Arab world.

To overcome shipping and distribution problems to their respective target markets, companies team up with businesses in target countries to establish a presence. Merchandise is shipped in large quantities, stocked at partners' warehouses or in affiliate locations and, finally, shipped to customers. Direct shipment from Lebanon is impossible, given high shipping costs charged by fast courier companies for small shipments, as well as long bureaucratic export procedures that result in long delays.

As a conclusion, one can safely say that Lebanon is an early starter with e-commerce in the ESCWA region. It has made excellent progress. However, it has a lot to go before it can be a major player regionally and internationally. In this study, recommendations are given to put Lebanon on the e-commerce world map.

### **Introduction**

The need to define the state of e-commerce<sup>1</sup> in Lebanon is crucial to stage the local economy for the future e-system. Several questions come to mind when discussing e-commerce in any economy. The following is the set of questions that we found are important to tackle in order to produce a set of recommendations for everyone involved in such an activity:

1. In what types of e-commerce activities are companies currently involved? In what type of activities do they aspire for the future?
2. What types of governmental regulations encourage e-commerce start-ups and existing businesses to grow and succeed financially?
3. What local and international legal frameworks could facilitate effective successful e-commerce activities?
4. What other organizations could assist in creating active participation in e-commerce activities?
5. How does the local technical infrastructure affect e-commerce?

### *Objective*

The objective of this study is to explore the status of e-commerce in Lebanon through investigations targeting businesses, consumers, and the public sector. Doing so garners insightful recommendations to help Lebanon further engage and

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<sup>1</sup> Due to the different definitions available for the term "e-commerce" (sometimes interchanged with e-business and e-services), this document refers to e-commerce as any transaction that facilitates financial exchange over the Internet

participate in e-commerce and to align the country with developed countries as a player in the global economy.

### *Methodology*

Data was collected from over 15 companies and key individuals in Lebanon using semi-structured interviews (see Appendix A). Interviewees were representatives from the Central Bank of Lebanon, software development companies, companies engaging in business-to-business and business-to-consumer e-commerce, an Internet Service Provider (ISP)<sup>2</sup>, a mobile phone operator<sup>3</sup>, a business consulting firm, the dotlb registry<sup>4</sup>, a certification authority<sup>5</sup>, and a payment gateway<sup>6</sup>.

Interview data was triangulated with other sources, analyzed and included in this document. Most of the additional information included in this study was used from local daily and monthly publications.

### *Structure of the Report*

This report defines the objectives of the study, gives an overview of e-commerce worldwide, and a specific one for Lebanon. It then targets and analyzes the principle factors affecting e-commerce in Lebanon. By doing so, it also provides opinions and recommendations in every section covered. The study is concluded with conclusions and a set of global recommendations.

## **E-commerce: An Overview**

Electronic (E-)commerce is playing a major role in the globalization of world economy, creating a revolutionary new way to do business. Using e-commerce systems on the Internet, organizations and customers from different parts of the world interconnect to place orders, make transactions, and execute payments seamlessly. By diminishing distances and bringing companies closer to their distribution markets, e-commerce creates a global marketplace.

E-commerce presents great advantages for both businesses and consumers. It creates new opportunities for large-scale multinational companies and small businesses alike. The greater beneficiaries of such systems are small and medium enterprises (SMEs), which can target new markets previously inaccessible and can directly deliver products to consumers. Today, SMEs located in developing countries, using e-commerce, can access markets with high purchasing power, such as Europe and North America. E-commerce also reduces the costs of outsourcing and import of required manufacturing materials and equipment.

While SMEs take advantage of e-commerce, consumers enjoy similar benefits. Consumers can shop comparatively for better prices from a greater choice of products. They can also break out from the physical constraints of the neighborhood

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<sup>2</sup> ISP is a company that gives Internet access to individuals and companies through phone connections or microwave links

<sup>3</sup> There are two mobile phone operators in Lebanon: Cellis and LibanCell

<sup>4</sup> Dotlb registry is the place where all domain names (ex: [www.myname.com.lb](http://www.myname.com.lb)) have to register. This central place is currently managed from a person at the American University of Beirut on a volunteer basis.

<sup>5</sup> A certification authority is a third party that exists on the Internet to attest to one's digital signature, among other functions.

<sup>6</sup> A payment gateway is a function that a company adopts to facilitate Internet credit card transactions

or town shop and purchase goods and services from around the world via the Internet. With power of choice, consumers can execute more influence on the quality and price of goods they purchase. One example of e-commerce advantage to customers is Internet auctions, virtual market places that bring together countless number of buyers and sellers. In these market places, sellers offer products for which buyers bid to reach an acceptable price. Auctions are very efficient price-regulating tools; the price of an item sold at an auction is as close as possible to the true market price of the item.

At the national level, e-commerce affects a country's competitiveness, enterprise mobility and consumer behavior. Today, most businesses located in developing countries do not have the ability to expand, due to limited markets. E-commerce will immediately create new markets by expanding their reach and, consequently, their turnover. Moreover, national integration into the global electronic market place will enable local consumers to access international markets for better and cheaper products than those available at home. As a result, consumers and SMEs will be able to break from the monopolistic activities usually executed by large corporations in smaller local markets. E-commerce will also allow SMEs to benefit from access to affluent international markets that were otherwise accessible only to multinational companies and, hence, to decrease the gap between international corporations and SMEs in developed countries.

At the same time, by opening up to global markets, SMEs face the serious challenge of competition with imported goods and services. Companies producing locally will have to raise their manufacturing and service standards to produce better products for local and international markets. Otherwise, they will lose their local markets to foreign e-commerce ventures that provide better quality products for a cheaper price. Even though the previously mentioned fact presents local businesses with a great challenge, it also creates greater long-term benefits for companies able to become more flexible to change. It also forces companies to raise their quality and management standards to international levels.

Comparing developed countries with ESCWA countries, the main concern lies in preventing the expansion of the digital divide<sup>7</sup>. This gap exists and may increase rapidly if economies do not act to prevent it. Most of the ESCWA countries, with varying degrees, have little or no Internet proliferation. They lack the adequate infrastructure for the development of e-commerce. Laws are still burdened by outdated bureaucratic procedures. More importantly, their business leaders lack the awareness to the benefits of e-commerce and the necessary skills to develop them. Developing countries are burdened by economic, financial, and social problems, leaving very few resources to be devoted to the development of the Internet and e-commerce.

These countries should understand that e-commerce is their chance to create an economic breakthrough and that neglecting this chance will only increase the gap between them and the post-industrialized world. Developed countries will tend to work with countries that can act fast and are Internet-enabled and use the latest

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<sup>7</sup> Digital divide is a term is used to define the difference between the countries who are embracing the digital revolution and the ones who are lagging behind.



technologies and logistical systems to conduct business. Developed countries prefer to deal with markets they can reach rapidly. They prefer markets from which they can buy goods and clear from respective customs quickly and efficiently. Therefore, if the situation does not change in the near future, ESCWA countries will not only be unable to integrate into worldwide markets and reap the benefits of globalization, their traditional customers will migrate their businesses to countries with a more efficient business chain.

To be able to integrate smoothly into the global marketplace, countries have to become part of the virtual market. This will demand a major leap in the standards, procedures, and skills from both local businesses and governments. To achieve this leap, coordinated efforts of government, businesses, and non-governmental organizations (NGOs) are required. Local businesses will have to decrease costs and sell online. They will have to increase their efficiency and the quality of their products and services and decrease overhead in their business operations. They must also start establishing online presence and learn the skills necessary to enter the global electronic marketplace. Businesses should overcome fear of change and start investing seriously in e-commerce and new technologies.

Governments, from their side, will have to reduce taxes on hardware and software and simplify custom regulations that add external cost to products. They will have to streamline all procedures that interfere with the business chain. They also have to attract investment in infrastructure necessary for the development of e-commerce. Governments have to encourage local businesses to embrace e-commerce and to show the necessity of being ready for globalization, the sure way to economic survival. By not doing so, countries will increasingly find themselves marginalized in the global markets.

NGOs should provide required guidelines and directions in which both governments and businesses should move to introduce e-commerce. They should also assist governments in the task of popularizing e-commerce and related education on the added values and benefits of e-commerce for businesses and consumers.

It has been projected that, within five years, most government procedures and business services in developed countries will be conducted electronically. Citizens will acquire general identification cards integrating financial information, medical history, and many other data. These "smart" cards will become one-in-all cards that contain information for identification, insurance, driving, social security, and personal money. The creation of e-government is a major step towards putting a country on the digital track. The resources that a government possesses, along with the collective efforts of its private sector, is instrumental in preparing a country for e-commerce.

### **E-commerce in Lebanon**

E-commerce in Lebanon is in an early stage. Some e-commerce ventures have been established, and new ones are starting to appear: online shops, auctions, services, content publishing and the preparation for m-commerce<sup>8</sup>, to name a few. However,

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<sup>8</sup> M-commerce (mobile commerce) is a term used to describe e-commerce conducted over cellular phones.

e-commerce still lacks the public endorsement from consumers, who usually give thrust to e-business. People are still apprehensive about security of online transactions and lack of consumer protection laws. Computer illiteracy seriously restricts the use of the Internet and e-commerce.

Many companies are unaware of e-commerce benefits and the necessity of embracing e-commerce for future competitiveness. The small base of Internet users and the size of the Lebanese market do not favor large investment in e-commerce ventures targeted to the local market. Therefore, there has been no mass migration of businesses to e-commerce. It is quite evident that the major brick and mortar players in the Lebanese market have little penetration into e-commerce activities, despite their ability to become the flagships of the electronic market place.

Given the high rate of increase of Internet users and stiff competition between Lebanese businesses in the local market, one should expect increased activity in business-to-consumer e-commerce. However, even companies that have embraced e-commerce or plan to launch e-commerce projects, many of which are start-ups, seem not to realize its full potential. This is reflected in services currently available over the Internet, in which the most evident market niches are absent. For example, food ordering and delivery by telephone is very popular; however, no online venture offers food delivery. Grocery delivery, which can be easily implemented by major superstores in Lebanon, has been completely overlooked. Perhaps the most striking example is Internet advertising. Despite the very lucrative nature of the advertising market in Lebanon, with Lebanon producing 30% of all advertising in the Middle East, no serious advertising agency offers Internet advertising services, such as media placement and marketing plans.

On the other hand, activity is increasing in other markets. For example, Internet banking may be expected to boom in the near future. Many major banks in Lebanon have started providing various forms of electronic banking services for their individual and corporate customers. E-commerce ventures directed to export and business-to-business activities, rather than to the local consumer market, are also appearing. These companies, despite the absence of regulations and despite having made no profit, have succeeded in setting up e-commerce businesses in supporting roles to their main business. They are planting the seeds for future expansion.

Many government institutions, such as ministries and agencies, have developed web sites, mainly to inform people about the respective ministry and its activities. For example, the Lebanese Ministry of Tourism has created a promotional website, rich in information, that promotes tourist activity and tourist sites in Lebanon. These informational sites do not offer online inquiries, such as questions about the status of a citizen's application, the ability to file for taxes online, or to view a telephone or electricity bill, which will prove to be useful.

One can safely say that e-commerce in Lebanon, as well as the region, is not a serious contributor to local economies, as it is not a serious business activity. Companies are still doing business the traditional way, while accepting changes in the system very painfully. This is due to cultural and sociological reasons such as the lack of awareness, and lack of governmental programs to introduce e-commerce in the country. E-commerce projects in Lebanon face numerous barriers to progress:

lack of efficient infrastructure, lack of venture capital and funding, and lack of laws and regulations that create an attractive environment for e-commerce in the country.

Despite these problems, e-business startups in Lebanon can be regarded as pioneers. Due to its highly skilled workforce, Lebanon has always played a leading role in media and technology markets in the Middle East. Most of the Middle Eastern countries use Lebanon as a reservoir of professionals for their businesses and industries. The skills and entrepreneurship of Lebanese may enable the country to reach great heights in the domain of e-commerce.

### **Telecommunication Infrastructure**

#### *Faster Access & More Affordable Fees*

During the 1990's, the government established an excellent telephone network infrastructure throughout the Lebanese territory. The network is extremely reliable, exceeding one million land lines, and is adequate for the initial stages of e-commerce. However, it will soon be outdated without proper upgrade. Today most Internet users in Lebanon use low-speed dial-up connection. Dialup access is moderately adequate for households but not for businesses. To support higher number of subscribers on their current infrastructure ISPs reduce the load per user on their outgoing connections. Users connect at speeds no greater than 33.6Kbps<sup>9</sup>. In reality, the Lebanese telecommunications infrastructure can sustain higher dialup bandwidth; the Public Switching Telephone Network (PSTN) can support connections of 56Kbps using V.90 protocol. Even 56Kbps dial-up, though, is not adequate for serious e-commerce applications. New high bandwidth technologies must be introduced in Lebanon: Digital Subscriber Line (DSL), Cable, and Integrated Services Digital Network (ISDN). DSL, for example, can support connection speeds of up to 1.5Mbps on the existing telephone lines. The same telephone line can be used for simultaneous voice communication and Internet access. The introduction of DSL in Lebanon will not require major modernization of the existing infrastructure. The Ministry of Post and Telecommunications (MPT) has recently introduced ISDN in Lebanon, at a point when ISDN is being replaced by new generation technology elsewhere.

At the beginning of 2000, companies started to introduce cable connection to the Internet. However, the government did not approve them from operating due to the lack of regulations and licensing procedures from the MPT for companies willing to provide cable access to the Internet.

One evident problem related to the infrastructure in Lebanon is the design of the local ISP networks. ISPs in Lebanon do not have local interconnection. In order to access a web site hosted<sup>10</sup> on another's ISP network, one has to go through the US or Europe and return to Lebanon. In addition, some ISPs do not have redundancy on their network; in case of network disruption on one path, no alternative path exists to sustain traffic. This makes local networks unsuitable for critical applications, such as online banking, online brokerage or video conferencing. Interconnection between

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<sup>9</sup> Kbps is short for Kilo bits per second. This is used as a measure of transfer of information on the Internet. The higher the Kbps or bandwidth, the faster the connection.

<sup>10</sup> Housed on a server in order to make the information on that web site available to Internet users.

ISPs and the redundancy factor must be addressed before any serious mission-critical e-commerce application may be considered.

Another critical factor is the creation of a network operations center to coordinate Internet traffic and avoid bottlenecks. Once the technical infrastructure is realized, the logistics in businesses using these services will require coordination. This national network operations center would make sure that redundancy, interconnectivity and reliability in Lebanon's data networks are covered. For a highly competitive infrastructure, Lebanon needs excellent coordination and serious money invested in the telecommunications sector and the ISPs. Lack of reliable and efficient communication infrastructure and lack of fast Internet access to individual consumers are two major problems of Internet infrastructure in Lebanon.

High cost of telecommunications is another major obstacle for e-commerce development in Lebanon. Better prices for Internet users (access and phone bills) must be introduced. Today, even though it is possible to get unlimited dial-up access for as low as US \$10 per month, the cost of telephone use charged by the MPT is very high. At US \$1.60 per hour, some Internet users, and especially businesses, pay as much as a US \$500 monthly access fee for telephone connection alone to access the Internet. The cost of a leased line, which may be an alternative for businesses, amounts to over US \$1000 per month, depending on the bandwidth requested.

The fierce competition among ISPs and the arrival of international ISPs to Lebanon signals highly awaited fast Internet connection to Lebanese households. ISPs will be forced to provide cheap and fast connection to gain advantage over the competition and to grab a greater share of the market.

The introduction of fast Internet connection, such as DSL or Cable connection, will enable businesses to provide more extensive information on their products. For example, customers will be able to view video clips of products in action. Businesses will also be able to provide more sophisticated shopping tools for customers, such as product comparison and online product customization tools. Fast connection will greatly decrease the time required for customers to search and shop for products over the Internet and, hence, will influence customers' willingness to shop online.

### *Internet Service Providers*

In 1999, Lebanese ISPs engaged in a price war, cutting rates to win more subscribers and launching new services to boost market share. Although ISPs make a smaller profit margin per subscriber, the increased number of users can help offset the loss through advertising revenue. This cyber war forced some ISPs to fold and others to merge to ensure quality of service and cheaper rates. Moreover, collaboration between banks and hardware companies to provide Lebanese users with low fee Internet access and payment plans for the purchase of hardware is helping promote Internet use in Lebanon.

It is worth noting that another challenge will arise from the increase in subscribers due to the increase in cyber-traffic that requires higher investments in hardware, bandwidth and personnel. In general, all operating ISPs in Lebanon charge adequate

fees to consumers that are comparable to their United States counterparts. However, the quality of service may not always be the same.

With the absence of a cable network, which can reach data transfer speeds more than 45 times what the best dial-up connection can provide, companies resort to more expensive microwave connections to acquire similar high-speeds. The price of microwave modems, however, remains exorbitantly high and has discouraged potential subscribers from enlisting. Clients must have a receiver/transmitter, leased by an ISP for around \$600 per month before they can make the great leap forward in speed for a further \$1,000 per month. The price differential is huge compared to the price of a cable modem connection in the United States that ranges from \$30 to \$100 per month.

ISPs in Lebanon charge very high prices for hosting services. Some ISPs charge up to three times as much as one would pay in the United States for hosting services and still do not provide the same services in terms of functionality or bandwidth. Therefore, numerous Lebanese sites prefer to be hosted in the United States. Other companies prefer to pay more for the personalized service they are getting which is not provided outside Lebanon.

While hosting services are more lucrative in North America and Europe than Internet connection provision, ISPs in Lebanon generally overlook hosting services. They plan very little major promotions for hosting services and seldom provide special offers. On the other hand, recent efforts have culminated in providing all-in-one packages for e-commerce containing hosting, database applications, shopping carts, and credit card billing and clearing services.

The ISP business in Lebanon is still lucrative and turning high profits. Regardless, given the size of the Lebanese market, some ISPs have expanded their operations regionally and teamed up with international giants. For a period of time, Lebanese ISPs were offering Syrian residents access to the Internet through the Lebanese telephone system. As one of the first countries in the Middle East to establish online presence and resulting knowledge, Lebanese companies have become exporters of ISP setup expertise, particularly in Saudi Arabia and Egypt.

### *Government Deregulation of Telecommunication Industry*

Lebanon still maintains a government monopoly on the telecommunication sector, except for the mobile phone sector that is currently in disaccord with the government. A good example of obstacles set by the government and hindering the development of e-commerce and Internet use in general is the lack of regulation of the cable system providers, hence the absence of their licensing. A second is the problem over high bandwidth mobile licenses. The introduction of high-speed mobile connection would greatly increase the size of the Lebanese e-commerce market.

Privatization of the telecommunication industry, as is happening across the globe, would increase the competitiveness of the market, reducing prices and providing better service to customers. Introducing open licensing for telecom operators would attract numerous investors in the industry and infrastructure. This would result in

higher quality services, better bandwidth, and more affordable connections – all to the advantage of individual and business consumers as well as the government. Also, this investment would create additional high-paying jobs to the benefit of the local economy. The introduction of the two private mobile operators in Lebanon, for instance, created 6000 jobs related to the mobile industry. It is estimated that the deregulation of telecom industry could create up to 10 times this number of jobs.

#### *Introducing New Technologies: WAP*

While access to e-commerce through personal computers is important, other companies in Lebanon are concentrating on preparing for the new wave of information access through mobile phones.

Wireless Application Protocol (WAP) has become the standard for mobile information delivery, enabling users to provide mobile telephony and information services, such as advertising, mobile banking, mobile shopping and online payment. It is expected that the number of mobile wireless service users will exceed the number of land-based Internet service users in the next four years. Lebanese mobile operators did not wait for the arrival of WAP to provide informational services. Today, these providers deliver news, stock quotes, advertising, and other information on mobile phones using Short Messaging Service (SMS), an integral part of GSM standards. The arrival of WAP will enable these companies to provide richer and more sophisticated applications. WAP definitely has a very promising future in Lebanon.

One mobile phone operator is studying the Internet market to align itself with its business group's expansion strategy; it wants to provide mobile and Internet access to the local market and, by the end of the year, become a major player in the Internet business. Moreover, this company is implementing a three-month pilot project to investigate the impact of mobile commerce (m-commerce) and to evaluate consumer behavior, bearing in mind that not too many mobiles support WAP at present. It is worth noting that the two mobile phone operators have been in dispute with the Lebanese government on such issues as taxation and contract interpretation affecting the progress of m-commerce in Lebanon.

Two WAP portals have already been launched in Lebanon by Q3 of 2000. Information such as news, finance, horoscope, and search engine services, and movie theatre purchasing are offered for the Lebanese public. It is estimated that approximately 2000 WAP-enabled mobile phones exist in the Lebanese market today and that all mobile phones will migrate to being WAP-enabled within three years. On average, Lebanese replace their mobile phones every three years.

Given the 650,000 mobile lines used in Lebanon and assuming that at least 50% of these mobile phone customers will become WAP users, the mobile e-commerce (m-commerce) potential client base will reach a comfortable 325,000 customers within three years considering that the number of mobile phone users does not increase. In contrast, computer Internet accounts have reached 100,000 since its inception in 1995. The technology and user interaction in WAP differs greatly from the Internet. Any person with a mobile phone that supports WAP could be a WAP user, given minimal active user interaction when it comes to information receiving. For

instance, any user with a WAP-enabled phone can passively receive advertisements on his or her phone, in addition to news, weather and stock market quotes, and also receive coupons-by-phone for later redemption towards goods or services.

### **Software Development**

Software development companies are aware of the growing need to create and support software products that facilitate e-commerce. Some companies are migrating their existing applications to web-based applications. By doing so, their clients also migrate to the new platform, increasing awareness and traffic on the Internet. One accounting software production house that specializes in accounting and stock is migrating its applications to the web and providing clients with 24-hour access to information and services. The migration of software houses from standard applications development to web site and web application development enables them to reach wider markets. Previously, those software houses specialized in database development, point of sale and accounting applications. Migration to Internet development extends their markets to reach most of the middle and large businesses operating in the region. These software production houses are positioning themselves to be identified by large corporations in the hope of getting bought out or partnering in the region. The benefits of such relationships are tremendous for SMEs, in terms of product and market expansion, as well as continuous human resource training.

Other newcomers, inspired with fresh concepts, are creating web-based applications only, such as Internet malls, auction sites and pure content sites. One can clearly observe that these sites duplicate or adapt what has already succeeded in developed countries. Localizing or adapting successful ideas in the West to our region is a good strategy to launch into e-commerce. Usually, duplication helps local companies engage in reverse engineering. This engineering process helps Lebanon understand successful products better in order to create better products of our own. A side benefit to this process is polishing the expertise of our local know-how by creating superior trained personnel.

Lebanese web companies are the leaders of web development in the Middle East. Like their ISP counterparts, web design houses have polished their expertise, being newcomers in the region, to export their skills to the surrounding countries. They were instrumental in helping companies in Syria, Egypt and the Kingdom of Saudi Arabia set up their services, for example. Some of these small companies with limited resources have succeeded in attracting external funds to expand regionally and to the European continent.

### **Human Resources**

#### *Expertise*

Even though Lebanon has a good base of information technology (IT) specialists, the field still needs enhancement. While IT specialists are technically very good, they lack management expertise, particularly for large-scale software development projects. This management expertise is necessary to execute quality projects on time and within budget. While it is estimated that executing an Internet project, planning,

design and preparation accounts for about 30% of development time, 40% for development, and the final 30% for testing and debugging. Therefore, acquiring expertise in planning and follow-up is crucial for software development.

Besides planning concerns, keeping talented recruits on board for the long term is a challenge. Due to the difficult economic situation in Lebanon, many skilled people are leaving for better opportunities. IT professionals, in particular, are in high demand in the United States and Europe. The average annual salary for a programming professional in the United States is around \$70,000. The same programmer may reach \$24,000 per year in Lebanon. To retain professionals, companies must pay higher wages and provide long-term benefits, such as continuous training and challenging projects.

### *Education & Training*

Today the major hinder in the way of Internet and e-commerce in Lebanon is lack of computer literacy and Internet awareness. This is especially evident with the senior management of Lebanese companies who did not have a chance to exercise structured continuing education. Unless a major effort is undertaken to educate upper managers on the advantages of e-commerce and about the benefits technology can bring to their companies, progress will be delayed.

While the government has introduced computer literacy courses in its new curriculum for K-12, it is lacking a clear plan to integrate and involve the educational sector in popularizing the Internet. The new curriculum integrates computer education into it, but schools still lack the appropriate hardware to implement this curriculum. An effort is under way to secure a minimum of 10 computers per public school in Lebanon. It is suggested that the government implement a national plan to decrease the digital divide between the “know” and “know-not’s.” Part of this plan is engaging into competitions, encouraging public libraries and the National Library. By establishing training centers to educate government employees on information technology, the government will encourage the private sector to do so. It is suggested that training should not only cover simple applications, but also introduce the basics of computer systems and help in changing attitudes towards computers to enable adult learners pursue life-long learning.

It is expected from the public sector to engage in creating public awareness regarding e-commerce, but it is also as important to see private institutions, businesses, and nonprofit organizations sponsor events and large-scale exhibitions to promote e-commerce. It is worth noting that the private sector has been active in playing its part of creating awareness in our society for business reasons as well as for philanthropic goals.

## **Banking**

### *Financial Infrastructure for E-commerce*

Online banking has a very promising future in Lebanon, partly because of the rich expatriate market and because banks have substantial cash flow to finance large-scale projects. Competition between banks will force retention of existing customers



and attraction of new customers. The corporate sector represents an important target; services to this type of clientele will streamline business-to-business transactions and provide a boost for business-to-business e-commerce.

Some banks have started their own online banking ventures, providing a great added-value service for Lebanese expatriates, in particular, those who live abroad and want to keep their money in Lebanese banks. Using these services, people will be able to control their bank accounts by executing basic transactions.

Business-to-business e-commerce procedures are still bureaucratic, since persons concerned have to open a Letter of Credit and follow it through the normal procedures. Banks will have to streamline business-to-business transfers and Letters of Credit, as well as create quick and efficient online systems to the benefit of their customers. To avoid these delays secure electronic payment systems are being deployed by banks.

Banks also are introducing escrow services to facilitate and guarantee e-commerce transactions. In a transaction using such service, the buyer transfers payment to the bank that provides the service. The bank then notifies the seller that it received the money. The seller ships the merchandise to the buyer and presents the bank with proof of delivery. After receiving the proof, the bank releases the payment to the seller. In this way, the bank guarantees both the rights of seller and buyer and makes the transaction more secure and trustworthy.

#### *Greater Credit Card Base*

The business-to-consumer activity of e-business is directly proportional to the number of credit cards issued in the country. As of September 1999, the number of credit cards issued by Lebanese banks was 228,000<sup>11</sup>, an increase of 53% from the year before. An estimate of 260,000 credit card holders in Lebanon is realistic. Until electronic cash becomes widespread and m-commerce is widely acceptable, credit cards remain the most acceptable form of online payment.

Lebanon's small credit card base and small number of online transactions force credit card processing facilities to charge high rates and cut into the profits of e-commerce companies. The commission rates charged by credit card processing companies can reach twice the rate charged by similar companies in the United States.

The issuing of more credit cards and the reduction of credit card interest rates will facilitate the processing of online payment transactions for suppliers and buyers. Numerous initiatives have advertised credit card services and informed customers of card advantages. Some banks have done a good job of popularizing e-commerce by introducing Internet credit cards. Consumers use these cards to execute online transactions for amounts not exceeding US \$200. Internet credit cards do not require a high credit rating with the bank; rather, they are designed for easy entry to credit building.

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<sup>11</sup> Source: Lebanon Invest

Another service indispensable for e-commerce is the availability of online credit card processing systems. Today, a handful of specialized companies provide such services in Lebanon. A sound strategy is to have processing centers provide such services in conjunction with special merchant accounts.

### **Project Funding**

It takes huge investments before reaping commercial benefits. Until measures are taken to release investment capital into the market and to establish viable investment mechanisms, e-commerce in Lebanon will be restricted to actions of individual entrepreneurs and will not enter the mass stage witnessed in the West. E-commerce applications have a relatively high investment cost, even though Lebanon has low e-commerce application development costs, due to cheaper and well-educated human resources, compared to developed countries. Lack of cash and third party financing, a small e-commerce market, high risk, and long incubation periods before projects become profitable make costs of investment in e-commerce very high for SMEs. It is expected that the banking sector play an active role in establishing e-commerce as a Lebanese industry by giving seed capital necessary for Internet startups. Banks can provide special e-commerce loans directly or create venture capital funds that, in turn, provide financing for Internet startups.

Most e-commerce ventures in Lebanon have very limited resources; entrepreneurs who start those businesses invest their personal money. These ventures do not have the large funding base available to e-commerce startups in the United States or Europe. This is due to lack of investment capital accumulation mechanisms in Lebanon. Three major factors have led to this situation.

1. *Lack of Activity in Beirut Stock Market:* Only a handful of companies are trading on the Beirut Stock Exchange. This is due to complex procedures required to go public with a company and little benefits presented in exchange.
2. *High Interest Rates:* Most investment money in Lebanon is frozen in banks or in government bonds, which present the investor with high interest/low risk rates, sometimes up to 15%. Lower interest rates will release this investment capital into more productive sectors of economy, including e-commerce.
3. *Little Involvement By Banks:* The only funding services practiced by most Lebanese banks are car and real estate loans. Banks have not been willing until lately to invest in productive sectors of economy, such as industry, agriculture, and e-commerce. The annual interest on commercial loans in Lebanon can reach up to 20%, compared to 6-10% for car and real estate loans. This is due to lack of loan insurance measures that must be established by the government.

Therefore, to develop e-commerce, Lebanon requires Internet incubators and venture capital firms to provide the necessary funding and facilities for startups. As such, these startups can concentrate on improving their business and expand without worrying about becoming profitable in the first two years of operation. A few

Internet incubators are starting to appear in Lebanon. An average venture capital company may start with \$5 million divided into 10 or 15 projects with an average \$250,000 funding per project. Therefore, the capital provided by these firms can be adequate but not capable of large scale funding that may be required for big e-commerce projects. Lebanon is seeing a good start of interest in venture capital. This good start needs more serious money to be able to venture into large projects.

Another possible solution is the creation of regional portals (vertical portals<sup>12</sup>) or Internet shopping malls that would provide a required e-commerce infrastructure. Participating businesses could worry about selling their goods rather than the technical aspects of the project.

Several side attempts are initialized to play a role in e-commerce such as the mobile phone operators. Both mobile operators in Lebanon are planning to offer WAP services. It is anticipated that they will become major players in the Internet market because they have a large base of prospective users and they have large financial means to implement projects. In addition, the other sectors of the Lebanese economy can also play a major role in the establishment of e-commerce market. For example, advertising agencies and large surface retailers have the means to participate in the e-commerce marketplace. What is lacking is initiative.

A good idea for accelerating the involvement of SMEs in e-commerce would be the establishment of Internet malls. Those malls will provide a ready-made infrastructure, hosting space, connection bandwidth, a customizable user interface and a secure online transaction mechanism. The owner of a SME will have to provide a rudimentary design that conforms to his corporate look, such as logo, font, graphics and colors. The SME should also provide information on products and services it offers to participate in the mall. Internet Malls will let the SMEs establish an e-commerce presence at a fraction of the cost that a full-featured in-house e-commerce system would require. The Internet Mall can charge a monthly fee or per transaction fee for the participating businesses. Internet malls are available in Lebanon. However, their traffic is still low.

### **Internet Security**

The lack of confidence in e-business in Lebanon is reflected in fear of non-delivery of goods, theft and fraud of credit card numbers. As long as e-awareness is not conducted aggressively and the private and public sectors do not establish e-commerce regulations and provide consumer security, the trust issue will be a major hindrance to online shopping. Consumers must be able to rely on procedures that will allow them to raise claims against businesses on grounds of poor product quality and non-delivery of goods.

Security of financial transactions is essential. Banks and other credit card issuers should actively explain to customers that risks involved in online credit card transactions are no greater than those involved in ordinary shops. In a similar vein, customers have concerns for the confidentiality of their transactions and the

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<sup>12</sup> Portals are web sites whose function is to create a high traffic starting point for all Internet users. For example, yahoo.com is a portal.

disclosure of their identity by e-commerce entities. The government must set rules in these regards. Their establishment will remove doubts that prevent Lebanese customers from buying online.

Some businesses involved in e-commerce, or planning to start an e-business, think that ISPs should implement mechanisms for security and confidentiality. However, it is the role of the e-business to ensure that those mechanisms are in place and properly functioning. The e-business bears full responsibility for customers' security and confidentiality. ISPs, on their part, must ensure that their networks and systems are completely secure and that they are using the latest available technologies to prevent fraud and unauthorized access to vital data involved in the e-commerce transactions. ISPs and e-businesses should closely cooperate to establish a secure environment for online business.

### **Legal Issues**

Legal frameworks are designed for users to rely on the validity of transactions and to engage in secure and reliable electronic communications. Legal frameworks are imperative to a flourishing e-commerce initiative.

#### *Intellectual Property in Lebanon Initiatives*

Lebanon is a member state in the World Intellectual Property Organization (WIPO) and is preparing to access the World Trade Organization (WTO). Therefore, Lebanon is making an effort to enforce Intellectual Property Protection in conformity with WTO and WIPO agreements.

Author's Right or Copyright mainly involves e-commerce content, such as literary, musical, artistic, photographic and audiovisual works. The Lebanese Copyright Law of 3 May 1999 updates the national protection of copyright and neighboring rights to new technologies and encompasses technological change and new areas of interest and concern. It essentially recognizes software as a copyright-protected work.

Industrial Property deals principally with the protection of inventions, marks (trademarks and service marks) and industrial designs, and the repression of unfair competition. Draft legislation has been submitted to Parliament concerning inventions.

#### *Evidential Law & Electronic Signature Initiatives*

Draft legislation related to the Evidential Law in Lebanon was submitted to the Council of Ministers on 12 July 2000. It amends some of the articles related to evidence in legal proceedings in the Lebanese Code of Civil Procedure. It recognizes electronic documents as equivalent to those in handwritten form and accepts them as evidence in legal proceedings. It also recognizes electronic signatures.

A committee reporting to the government that deals with information security, including representatives from governmental agencies, banks, ISPs, and major e-

commerce players, should be established. This committee would be responsible for evaluating existing online security systems and online security legislation, proposing new laws, and introducing new security systems to the market.

#### *Authentication Initiatives*

One of the main issues to be addressed is whether the government should license or regulate authentication technology or authentication service providers. Initiatives are underway in the private sector to enable users to trust these technologies. A special interest group is working on a draft law to provide official accreditation to Certification Authorities (CAs) and to give the government regulatory authority over them. This law would grant specific legal benefits to CAs and the electronic signatures they confirm.

#### *Trademark Registries*

Lebanon has seven commercial registries that issue trademarks. No examining entity supervises them. If one does not contest a trademark within five days of its being published in the national gazette, s/he has no reclaim against someone who has taken the trademark, except in court. Until a central agency is established to control the application of intellectual property rights and trademarks, players of the e-commerce market may experience violations of their business designs and trademarks.

Moreover, in order to avoid confusion, changes should be introduced in existing commercial, financial and tax laws to facilitate e-commerce operations and to protect consumers. Parliament has a major role in passing all necessary legislations. As an important facilitator, the government could assign a committee of professionals, compared to the bureaucratic structures now existing, to study and implement necessary regulations. All types of contractual laws should have special amendments related to e-commerce transactions.

#### *Regulating ISPs*

Another area ripe for regulation is data traffic provision, in order to monitor the activities of ISPs and other businesses providing data transport services in Lebanon. Today, no Internet business is regulated. No standard document defines the requirements and rules governing ISPs and other Internet businesses. A haphazard system of license granted/denied is in place. Chambers of Commerce should play a more active role by lobbying for necessary regulations and by creating a more favorable atmosphere to promote ISP regulations.

#### *Initiatives Needed*

1. Implementation of consumer protection, computer crime, and data protection laws, as well as cryptography regulations
2. Design and delivery of awareness programs to build trust once the appropriate frameworks are in place

3. Governmental backing of a global electronic community in which the rights and responsibilities of all individuals are the same as in the paper-based environment

## Markets

### *Open Market*

Due to the small number of Internet users in Lebanon, the Lebanese e-commerce market is very limited. The e-commerce projects should focus on exporting goods or services from Lebanon rather than becoming pure consumer projects catering for local markets. This situation will not change until the number of Internet users increase. It will also change in case of a wide spread WAP users, that will enable the e-businesses to tap into the large pool of Lebanon's mobile phone users and use m-commerce. However, even taking into consideration the above-mentioned facts, some e-businesses targeting niche markets have a very good chance of succeeding on Lebanon's electronic marketplace.

Lebanese are good consumers of technology, however they should be educated on the value and advantages presented by e-commerce. Lebanese do not have to reinvent anything, they just have to apply the technologies available in the west and use them to market Lebanese products and make them available to the world as well as sell them in the region. It is important to note that the emphasis of sales must be targeted towards the United States and Europe due to their obvious acceptance of e-commerce and their strong purchasing power. Due to poor economic situation in the region, the better prospects are for e-commerce that sells directly for export of locally manufactured goods to developed countries.

### *Business-to-Business vs. Business-to-Consumer*

The business-to-business sector of e-commerce in Lebanon is more active than business-to-consumer. Some companies have established themselves as infrastructure providers for electronic ordering and electronic transaction processing in the business-to-business domain. Some of them electronically link a number of large wholesalers to retailers. The systems in place are usually very similar. The retailer places an order online, and the company transfers the order to the wholesaler. The wholesaler delivers the merchandise to the retailer and collects payment upon delivery. Large wholesalers, catering to their own businesses, establish most of these companies.

Manufacturers also engage in business-to-business e-commerce, especially those with product exports to the United States and Canada, France, Brazil, and the Arab world. Food processing is one such market. Since some clients order large quantities of products, plants create web sites to use as intranets for their clients. The web sites allow clients to select items and place orders online in real time. This process used to take weeks, due to the cycle of receiving the order, drafting a proposal, getting a response and, finally, placing the order. The method of payment remains the same: a Letter of Credit or a similar system.

Another good example of an e-commerce prospect is a major Lebanese winery that launched an information web site in 1998 and implemented e-commerce capabilities this year. The site is currently selling 8% of its total exports online. This figure tripled since 1999 to \$30,000. This company is aiming for e-commerce to cover 40% to 50% of its total exports. Like the food processing plant, this wine maker used a business-to-business distribution partner in the US. The partner sells to other distributors across the United States and the distributors reach the end consumer.

The above-mentioned manufacturers are strictly targeting the business-to-business export sector. They do not use e-commerce to sell to the local markets for two reasons. The first is lack of necessary infrastructure that will enable local businesses to place online orders. The second is the monopolistic activity of major distributors of their products in Lebanon, which do not allow manufacturers to sell directly to the local market. This latter reason restricts these companies' development of business-to-consumer e-commerce capabilities.

These companies are also not interested in selling directly to consumers overseas, especially when they are shipping goods from Lebanon. Weight of goods and cost of shipping do not justify business-to-consumer operations. As a marketing strategy, these businesses have affiliated themselves with businesses in the United States, Canada, and/or Europe, where products are supplied from Lebanon and distributed by partners to businesses and consumers alike.

### **Shipping and Export**

As discussed above, significant problems facing e-commerce businesses surround the logistics of delivering the goods within a few days to their respective clients. The prompt delivery of goods is imperative to establish relationships of trust between customers and merchants. Customers should not feel the difference between buying from an e-business located in their home country and an e-business located on another continent. Otherwise, the online ordering has no advantage over its traditional shop counterpart. Fast on time delivery of goods is the cornerstone of e-commerce; without it, e-businesses will never succeed.

To overcome shipping and distribution problems to their respective target markets, companies team up with businesses in target countries to establish a presence. Merchandise is shipped in large quantities, stocked at partners' warehouses or in affiliate locations and, finally, shipped to customers. Direct shipment from Lebanon is impossible, given high shipping costs charged by fast courier companies for small shipments, as well as long bureaucratic export procedures that result in long delays.

Lebanon's export infrastructure is clearly inadequate for business-to-consumer e-commerce. Even though shipping and courier services are very efficient, they are expensive; particularly for small volumes and parcels from 1-10 kg. Shipping companies blame the high costs and long delays on poor infrastructure. To create an e-commerce market, it is imperative that low cost and fast shipping services are introduced.

To overcome shipment disabilities, some e-businesses<sup>13</sup> opt for maintaining inventory in the United States or Europe and ship to consumers directly from there. They have either formed alliances with American or European companies or established their own business representation.

One of the obstacles in the way to efficient shipping facilities are complex bureaucratic procedures necessary to execute shipments. Procedures can take several days to complete and seriously delay shipments. Bureaucracy should be cleared from export procedures and the export chain streamlined to favor direct export from Lebanon. Another measure is the reduction of export taxes and fees. This measure would directly make e-commerce ventures more competitive.

### **E-Marketing**

Internet advertising is almost absent from Lebanese e-commerce market. In the advertising sector, which is one of the booming sectors in Lebanon, we do not have any major advertising companies selling and placing advertisements on the Internet. One wonders how come when advertising on the net is one sector of the cash generating e-businesses.

The Internet advertising is a major cash generation source for western companies by enabling Internet projects to sustain themselves. Even in North America and Europe, most of the e-commerce projects cannot achieve the level of sales required for profitability; to fill the gap they are using advertising as the secondary source of revenues, and sometimes the revenues from advertising exceed the revenues from sales.

The boost of online advertising in Lebanon will create an additional source of revenue for the Internet ventures, and will allow them to reach profitability faster. The Lebanese advertising agencies have large resources, and big teams of skillful professionals, the participations of those agencies in online marketplace will only benefit the e-commerce.

### **Creating e-Awareness**

#### *The Need to Highlight Benefits*

Businesses in Lebanon do not have the awareness of the benefits they can reap by establishing e-commerce presence. The Internet presence is not only restricted to selling online. While e-commerce web sites help sell products over the Internet, they also save companies money in time spent to respond to informational inquiries. This is a fact with the winery, which uses its web site to disseminate educational information to students and researchers regarding wine production and the wine industry in general. Such an indirect function can provide a more efficient and higher quality service for customers – and potential customers.

Lack of confidence with technology directly impacts perceptions of benefits. For example, local pharmaceutical retailers participating in business-to-business e-

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<sup>13</sup> Like the food plant and the wine maker



commerce systems refuse to use the automatic stock replenishment function, which places an order for a given product when the quantity of product units in stock reaches a given minimum. These retailers fear that the system will place an order automatically without referring to them, and they miss the point. In addition, even though they are active participants in an e-commerce system and they receive discounts on products they order electronically, many of them continue to use the old method of ordering products by telephone or paper. As the pharmaceutical business-to-business e-commerce system describes, only 2% of the retailers place orders online on a daily basis and 10% place online orders once or twice per week. Up to 25% percent of the retailers use the system less than once per month.

### *The Need for Basic Hardware*

One problem e-commerce startups face is lack of proliferation of computers in Lebanon. Many small businesses and households neither own nor think it is necessary to purchase a computer system. Inherently, they are unable to use any e-commerce system. Computers are still expensive in Lebanon compared to the US and Europe. If customs duties on computers and telecommunications fees drop, one could expect the number of computers and Internet access in Lebanese households to increase. The government should put a target to increase the number of computer users to one million to help create an acceptable local e-commerce market.

### **Conclusions and Recommendations**

Lebanon was an early starter with e-commerce in the ESCWA region. The private initiative in Lebanon has put the country among the main players. On matters of know-how and private initiatives, Lebanon is still a leader in the region. In terms of infrastructure, human resources, banking, legal issues, the country is advanced in relation to its neighboring countries. However, the funding available to Internet ideas is relatively low and practically non-existent compared to the GULF region even though the cumulative individual effort may add up to some significant figure that this author will not be able to estimate. Lebanon's big focus should be on exporting of know-how, services and goods. Creating new markets and solidifying presence in niche markets is a must. Despite the fact that Lebanon is still far from being a major player regionally and internationally, it is on for an excellent start that needs to be nurtured.

The following are recommendations to be discussed, and hopefully adopted, to put Lebanon on the e-commerce world map:

### *Telecommunication Infrastructure*

1. Introduce high bandwidth technologies such as DSL, Cable and ISDN
2. Lower international tariff prices
3. Lower local phone fees
4. Improve and speed up regulations for telecommunication service applications
5. Privatize land line system
6. Create of a local internet node
7. Create a network operations center

8. Promote new technologies such as WAP

#### *Software Development*

1. Migrate applications to be web-enabled
2. Engage in reverse engineering
3. Position companies for regional and international alliances
4. Promote software and web design houses
5. Target to sell services regionally and internationally by creating alliances

#### *Human Resources*

1. Invest in software management training
2. Create related majors in schools and universities
3. Create long-term benefits for local talent to stay in Lebanon
4. Offer challenging projects for employees
5. Provide continuous training for employees
6. Provide e-awareness for general public
7. Nurture computer literacy

#### *Banking*

1. Provide seed capital or loans to jumpstart e-commerce projects
2. Implement comprehensive online banking services
3. Speed up business-to-business transactions
4. Promote to increase credit card holder base
5. Issue credit cards with no initial fee
6. Lower credit card interest rates
7. Give merchants "e-commerce" loans

#### *Internet Security*

1. Give official recognition of third parties who offer security services
2. Establish procedures for consumer claims
3. Establish a committee whose task is to follow up on internet security issues

#### *Legal Issues*

1. Enforce Intellectual Property Protection
2. Ratify draft legislation concerning Inventions
3. Ratify legislation relative to the Evidential Law
4. Regulate authentication service providers
5. Implement consumer protection law, computer crime law, data protection law, and cryptography regulation
6. Promote a global economic community in which all rights and responsibilities of individuals are similar to those in the paper based environment
7. Creation of one central computerized trade mark registry
8. Creation of a standard for internet service quality

### *Markets*

1. Implement a tax reform to facilitate e-commerce
2. Regulate customs duties to promote e-commerce
3. Focus on exporting goods and services with which Lebanon has a strong base
4. Identify and tap into niche markets
5. Use new venues such as m-commerce
6. Concentrate on business-to-business until conditions get better for business-to-consumer

### *Shipping and Export*

1. Create logistics of delivering goods within 2-3 business days in business-to-consumer
2. Solve the dispute between the government sponsored courier carrier and the other private services to lower fees on the consumer
3. Simplify export procedures
4. Reduce export taxes and fees

### *E-Marketing*

1. Promote the creation of e-marketing companies
2. Promote e-advertising companies

### *Creating e-awareness*

1. Highlight the benefits of e-commerce through education
2. Increase computer literacy from the base
3. Promote basic hardware proliferation in society
4. Encourage using Arabic on the Internet

### *Project Funding*

1. Create an inviting environment for venture capital and Internet incubators
2. Regulate the interest rates of governmental bonds
3. Increase bank involvement by providing low interest "e-commerce" loans

## Appendix A: Guidelines For Interview

<b>E-commerce As It Relates To You</b>
Are you conducting e-commerce in your business?
Is it the main business activity or is it a supporting activity?
In what type of e-commerce activity is your company currently involved?
Do you have any aspirations to engage in another type of e-commerce activity?
Have you encountered problems setting up e-commerce solutions in your business?
Have you encountered problems while conducting e-commerce activities?
What are the main concerns you have as related to e-commerce and your business?
<b>E-commerce Players &amp; Factors</b>
What organizations could assist in creating active participation in e-commerce?
What are the criteria that would facilitate e-commerce activities?
Are there issues related to trade, in particular?
What are e-commerce characteristics we can borrow from developed countries?
What characteristics we should not borrow?
<b>Banking &amp; Insurance Sectors as Players</b>
What role is the banking sector taking with e-commerce?
What role would you like the banking sector to take with regards to e-commerce?
What role is the insurance sector taking with e-commerce?
What role would you like the insurance sector to take with regards to e-commerce?
<b>Infrastructure &amp; Technical Considerations as Players</b>
Do you think that we have adequate infrastructure to conduct e-commerce?
Can we compete with developed countries?
How would Arabization of the internet help promote e-commerce in the region?
How does the telecommunication infrastructure affect your business?
How does security on the internet affect your business?
<b>Government Regulations</b>
What kind of role should governments play in e-commerce?
Do you know of any regulations that are promoting e-commerce activities?
Do you know of any regulations that hinder e-commerce activities?
What are your suggestions to improve the government's role in e-commerce?
What kind of support are you getting from government agencies regarding e-commerce activities you are conducting, or wanting to conduct?
Would you describe a viable relationship between the private and public sectors to promote e-commerce?
How does the taxation law affect e-commerce?
How do customs regulations affect e-commerce?
<b>Legal Aspects</b>
What role is the legal branch taking in promoting e-commerce?
What role would you like the legal branch to take with regards to e-commerce?
Do you think that regional cooperation helps in promoting e-commerce? If so, how? If not, why?
What is the impact of international agreements on Lebanese e-commerce?
<b>Promotion of E-commerce</b>
How can e-commerce be promoted in Lebanon and the region?
In your opinion, who can help promote e-commerce?
Do you think that there is adequate awareness regarding e-commerce in the region?
<b>Your Wish List</b>
What would you like to see happen in the business of e-commerce?
What five actions would you take to promote e-commerce in the region?