ExportIT MARKET REPORTS

TIMELY INFORMATION FOR SMALL AND MEDIUM-SIZED TECHNOLOGY BUSINESSES

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For smaller companies, quality market research is often difficult to find and expensive to obtain. With this in mind, the Information Technology Industries Office within the International Trade Administration has created a series of foreign market reports geared to small and medium-sized companies in the areas of information technology, telecommunications and e-commerce. These reports are a unique source of information, not only on the commercial aspects of selected foreign markets, but also on the relevant government laws, regulations, policies, and broader economic developments that affect how business is conducted. Chapters are devoted to overviews of the markets from each industry's perspective; market entry strategies; useful contacts; and legal and regulatory information. The reports are based on market research and analysis undertaken in each country by a team of industry specialists from the Information Technology Industries Office. During each research visit, these experts work closely with officers from the U.S. Commercial Service based in the U.S. embassies.

Previous reports have focused on Argentina, Brazil, Germany, Korea, Hong Kong, and the United Kingdom. These reports can be found online at http://ExportIT.ita.doc.gov. Upcoming reports will cover Mexico, Argentina (an update as of March 2002) and Central Europe (the Czech Republic and Hungary). Excerpts from these latter reports are provided below.

MEXICO

With a population of over 100 million inhabitants, Mexico's telecommunications equipment and services markets have considerable growth potential, due largely to relatively low fixed-line teledensity and resultant pent-up demand. Privatization and pro-competitive measures first announced in 1989 significantly pared back the Government of Mexico's role in the telecom sector. Many of these measures were codified in the 1995 Federal Telecom Law (FTL), which was introduced to replace a law governing the telecom sector dating back to the 1940s. The FTL allowed new entrants into the market to compete with Telmex. It opened every telecom service up to competition, allowed higher levels of foreign participation, and mandated interconnection and transparent as well as non-discriminatory processes for licensing. On the legislative front, Mexico's Congress is presently in the early stages of discussing a draft telecom reform law that it hopes to pass by September 2002.

At year-end 2000, basic telephony and data communications services in Mexico combined to generate revenues of roughly $8.1 billion. Local telephony was the largest segment of the market, accounting for 58 percent of revenues. New entrants to the fixed communications marketplace are

expected to invest most heavily in the local telephony sector. As transmission of data becomes increasingly crucial to the corporate sector, the segment with greatest room for growth in the next five years will likely be data communications. This should increase demand for bundled packages of services and spur investment in end-to-end technologies that enhance the competitiveness of new entrants' offerings. Additionally, demand for telecom equipment is sure to increase over the next five years, as both residential and corporate clients drive telecom operators to upgrade their networks to take advantage of higher-speed technologies that maximize the potential of the Internet. Significant changes are expected to accompany rapid growth in the wireless market over the next few years as competition heats up and operators consolidate their holdings in the market.

The information technology (IT) sector in Mexico has developed at an impressive rate over the last few years. According to International Data Corporation (IDC), the compound annual growth rate from 2001 to 2005 is expected to be 7 percent. Growth in this sector is expected to continue, as several programs established by both the public and private sectors take effect to stimulate the use of IT throughout the economy. Computer hardware continues to dominate Mexican IT expenditures, accounting for 59 percent of IT expenditures in 2001, with personal computers accounting for 62 percent of hardware sales. Demand for computers continues to grow in all segments, particularly in the small businesses and home use markets.

The software market in Mexico is very competitive, with most major U.S. and other foreign software developers selling in the market. More than 90 percent of packaged software sold in Mexico is imported, mainly from the United States. In contrast to packaged software, over 90 percent of customized software is developed in Mexico. Sales of software in Mexico were $632 million and are expected to

decline slightly in 2002 and remain flat over the next two years.

The Mexican Internet penetration rate was approximately 3 percent in 2001 and the number of Internet users is expected to grow rapidly over the next three years. U.S. companies will find ample opportunities for both investment and sales in Mexican Internet-related products and services. Over the long-term, Internet use is expected to increase as the process of technology diffusion continues, moving from larger companies to their suppliers, from institutions of higher education down to secondary and primary schools, and from the Mexican federal government out to local governments. Most Internet accounts will remain dial-up rather than broadband through 2005 according to Pyramid Research. Wireless Internet use may become more widespread in the future as a result of the serious infrastructure problems with the fixed line Internet.

E-commerce in Mexico is expected to reach approximately $38 billion by

2005, up from $1.2 billion in 2001, making it a leader in Latin America in terms of potential for future growth in this area. Currently, business-to-business (B2B) is more prevalent than business-to-consumer (B2C) e-commerce. In 2000, B2B accounted for 77 percent of the total transactions in Mexico. The main issues affecting B2C e-commerce include: low Internet access rate; small consumer purchasing power; problems associated with credit cards and the banking system; and educational and awareness issues. B2B is projected to reach 84 percent of the e-commerce market by 2005.

One the most promising developments related to Mexico's e-commerce future is the government's new commitment to making Mexico a true digital economy. The development of the E-Mexico program is the most obvious manifestation of this commitment. E-Mexico's, main goals are to develop Mexico's IT industry; foster an internal market for IT products; promote an adequate regulatory framework in the use of electronic media

and e-commerce; and digitalize government services in order to create a model for the private sector. Leaders of E-Mexico claim that by 2025, 98 percent of Mexican citizens will be online, IT and Internet education will be available in all schools, and the legal and regulatory structure for e-commerce will promote greater consumer confidence, including the use of credit cards for online transactions.

Another positive development in this area is the work that is being done on the e-commerce legal and regulatory structure. Both the private sector in Mexico and the Mexican government are extremely committed to revamping laws that pertain to, or affect, e-commerce. In 2000, the government of Mexico began this undertaking with the passage of four amendments to existing laws — referred to as the E-Commerce Law 2000 — resulting in the following: electronic contracts are recognized legally; information transmitted online will stand up in judicial proceedings; and, consumer protection laws cover the online world.

While the E-Commerce Law 2000 was a very productive beginning, a number of additional laws and regulations have been proposed to make Mexico's laws related to e-commerce "inter-operable" with other digital economies. Perhaps the most important is the "e-invoice" legislation, which will eliminate the requirement that businesses provide hard copies of invoices in electronic transactions. Additional legislation related to digital signatures, consumer protection, data privacy, and intellectual property rights are pending in the Mexican Congress.

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ARGENTINA

This report updates a previous study entitled "ExportIT Latin America: Highlighting Argentina and Brazil" which was published by the U.S. Department of Commerce's International Trade Administration in June 2000.

The Argentine market for information technology products and services remains the third largest in Latin America after Brazil and Mexico, but has been in the doldrums over the past two years. As a result of Argentina's deepening recession and mounting debt crisis, IT spending slowed considerably in 2000 and declined by 21 percent to $2.8 billion by the end of 2001, according to estimates from International Data Corporation (IDC). IDC believes that Argentina will bounce back very strongly in 2003 and experience the fastest growth in IT spending of all major Latin American nations over the next four years, rising at a 40 percent average annual rate to $5.2 billion by 2006.

The ongoing build-out of Argentina's telecommunications infrastructure should have a strong positive effect on networking equipment demand over this decade. Argentine businesses and public sector agencies will become more networked through increased use of intranets and extranets, enabling them to boost the efficiency of their operations and cut costs. Argentine firms, in particular, should boost their investments in software for enterprise resource planning (ERP), back office solutions, and integration of front and back offices to improve their competitiveness in terms of cost and service. The major vertical market sectors will be banking and finance, logistics, and medical and health care management.

The Internet user base in Argentina has doubled over the past year, reaching two million people in mid-2001. The main factors driving this expansion have been the availability of cheaper PCs and reductions in Internet access fees. Home use remains low at 14 percent of all Argentine households and is concentrated in Buenos Aires, which means that the residential sector nationwide has been barely penetrated. Business access to the Internet is almost universal.

Argentina experienced a shakeout in Internet ventures over 2001 comparable to the one that occurred in the United States. Internet Service Providers (ISPs) were especially hard hit and many of the more attractive of the local independent ISPs were bought up by better capitalized foreign firms eager to gain market share in Argentina.

Dial-up access to the Internet is still dominant, but interest in broadband is mounting. Thanks to the deregulation of the telecommunications market and the ensuing competition between service providers for customers, cable modem and asynchronous data subscriber line (ADSL) prices have plunged to a low of $60 per month now. Wireless Internet access is in its infancy. Industry observers feel that this technology has great promise in the future, given the relatively low PC penetration rate and the rapid growth of cellular telephones in this country.

The size of Argentina's e-commerce market is expected to range between $6.7 and $13 billion by 2004. Business-to-business (B2B) electronic commerce accounts for the bulk of Argentina's electronic commerce revenues. The use of business-to-consumer (B2C) electronic commerce has not really caught on in Argentina. As of mid-2001, only 4 percent of all small firms and 12 percent of large enterprises sold products and services online. Federal government agencies have been working to place all of their operations online and have established a government Web site that gives citizens access to information on government ministries and services, other sites of interest, and late breaking news. While progress towards creating a true "electronic government" has

been limited thus far, most observers believe that the Argentine government's commitment to the program is strong and that its implementation will continue when the economy picks up.

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CENTRAL EUROPE

The telecommunications and IT markets in the Czech Republic, Poland, and Hungary are unquestionably the most advanced in the combined Central and East European region. Privatization of former state-owned telecommunications providers, liberalization of telecommunications markets, and greater competition has spurred growth in the telecommunication sector throughout the region. Each country has enacted telecommunications legislation that requires full liberalization of their telecommunications markets by the end of 2002. As part of this process, the governments of Central Europe are establishing independent telecom regulators.

Demand for information and telecommunications technologies in Central Europe is being driven by many factors, two of which can be attributed to EU accession. In preparation for EU accession, many companies in Central Europe are trying to transform themselves quickly into world-class competitors. This process is creating considerable commercial opportunities for U.S. high-tech firms with expertise in the fields of information technology and telecommunications to invest or sell their products.

The Central European telecom markets are expected to experience a period of upheaval over the next several years, as they transition from monopolies to free competition, from voice to data, and from fixed to mobile. New license awards for wireline and wireless (cellular, and fixed wireless access) services are driving network expansion and the offering of new services throughout the region. The wireless segment, in particular, is experiencing robust growth in most countries in Central Europe, as they look to wireless technologies to increase teledensity levels rapidly. As telecommunications giants such as Deutsche Telecom, KPN, and Swiss Telecom pull out or scale back their investments in Central Europe, others, such as Vivendi, see this as an opportunity to establish or expand their presence in the region.

The PC penetration rate in the Central European countries has significantly increased in the past five years, largely driven by the small and medium-sized enterprise market. Since 1989, Central European governments, in an effort to implement major economic reforms, are sponsoring initiatives to encourage the use of information technologies, such as multimedia and the Internet. Incumbent telecommunications operators in Central Europe have capitalized on their dominant position in the telecom market and have taken leading positions in the Internet access markets. The low level of PC penetration and relatively high Internet access rates has hampered Internet growth. Although Internet use in Central Europe is relatively low compared to the United States and Western Europe, it is expected to grow considerably over the next several years.

Most Web sites in Central Europe are static and only offer general information about the company and the products. However, this is expected to change if Central European companies follow global trends, where the primary purpose of Web sites has become sales. While many retailers are developing online sales channels, electronic commerce in Central Europe is dominated by the business-to-business (B2B) segment. This trend should continue for the next few years. There are opportunities for U.S. companies providing e-commerce-enabling products and services, but end-users will consist mainly of the largest companies in the region.

Many Central European firms are upgrading their legacy computer systems, investing in enterprise and customer management software, intranets and extranets, and integrating front and back offices. More and more Hungarian and Czech firms are eager to implement Internet and electronic commerce strategies. As a result, there is growing demand for professional Internet and electronic commerce services such as Web site design, and for systems integrators to install, program, and connect servers to legacy infrastructures as well as integrate Web sites and back office operations.

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