Presidential Initiative on Internet for Economic Development: Assessment for USAID/Morocco

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Acronyms and Abbreviations

AmCham	American Chamber of Commerce
ANRT	Agency Nationale de Reglementation du Secteur des Telecommunications
ATM	Automatic Teller Machine
BSA	Business Software Alliance
BCP	Banque Centrale Populaire
CIH	Credit Immobilier et Hotelier
CSE	Casablanca Stock Exchange
CSP	Country Strategic Plan
DOC	U.S. Department of Commerce
EDI	Electronic Data Interchange
EU	European Union
FCC	Federal Communications Commission
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GII	Global Information Infrastructure
GNP	Gross National Product
GOM	Government of Morocco
GPBM	Groupement Professionnel des Banques du Maroc
IAM	Itissalat al-Maghrib
ICTs	Information and Communications Technologies
IED	Internet for Economic Development Initiative
IFC	International Finance Corp
IMF	International Monetary Fund
IRs	Intermediate Results
IPOs	Initial Public Offerings
ICTs	Information and Communications Technologies
IED	Internet Economic Development Initiative
ISP	Internet Service Provider
IT	Information Technology
ITU	International Telecommunications Union (United Nations)
LANs	Local Area Networks
MAGHREB	Algeria, Libya, Mauritania, Morocco, and Tunisia
MCT	Multi-purpose Community Telecentre
MNCs	Multinational Corporations
NGOs	Non-governmental Organizations
NII	National Information Infrastructure
NTIA	National Telecommunications and Information Administration
OECD	Organization for Economic Cooperation and Development
OCP	Office Chérifien des Phosphates

OEM	Original Equipment Manufacturer
PC(s)	personal computers
PSTN	Public Switched Telephone Network
PTO	Public Telephone Operator
PTT	Postal Telegraph and Telephone
RTII	Regional Trade and Investment Initiative
PVOs	Private Voluntary Organizations
SEPTI	Secretary of Post and Information Technology
SME(s)	Small and Medium-sized Enterprises
SO(s)	Strategic Objectives
SpO(s)	Special Objectives
TPI-SAL	Telecommunications, Post and Information Technology Adjustment Loan
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme
UNITU	United Nations International Telecommunications Union
US	United States
USAID	United States Agency for International Development
USAID/W	United States Agency for International Development/Washington
VAT	value-added tax
VSAT	very small aperture terminal
WB	World Bank
WIPO	World Intellectual Property Organization
WLL	Wireless Local Loop
WTO	World Trade Organization

Assessment Background

Vice President Al Gore announced the Internet for Economic Development Initiative during his October 12, 1998, address to the International Telecommunication Union Plenipotentiary Conference in Minneapolis, Minnesota. Among the challenges he issued were placing voice and data communication services within reach of every person on the planet. Initially, the Initiative will seek to demonstrate successful models for development using the Internet in a small number of USAID-assisted countries. The Initiative is directed by USAID at the country application level and coordinated by the U.S. Department of State at the inter-agency policy level.

USAID believes that Morocco is an excellent country for pursuing Internet applications for development. For that reason, a team sent from USAID/Washington joined with USAID/Morocco staff to undertake an assessment and make recommendations on how its can help expand results achieved under USAID/Morocco activities.

The Country Setting[3]

Morocco has recently achieved substantial political liberalization. Following elections in November 1997, King Hassan II appointed Abderrahmane Youssoufi, the leading opposition figure and a one-time exile, as Prime Minister in February 1998. Mr. Youssoufi heads a government backed by a seven-party center-left coalition, the Koutla, which holds 102 of the lower chamber of Parliament's 325 seats. This Alternance Government marks the first time in independent Morocco's 42-year history that the opposition has had the opportunity to govern. It also marks a break from the recent succession of technocratic, "transitional" governments, although the Alternance Government has reappointed the Ministers of Foreign Affairs, Interior, Islamic Affairs, and Justice.

The Alternance Government exemplifies the overhaul of Morocco's political institutions, spurred on in large measure by the King, and continuing after his death in the summer of 1999. An amended constitution, adopted in September 1996, responded to long-standing calls for a return to direct election by universal suffrage of members of the House of Representatives, and made the Government more accountable to the Parliament. Under the new constitution, the Parliament is composed of 325 elected members of the House of Representatives and a 270-member Upper House of Counselors (representatives of chambers of commerce, labor unions, and local communities). The state's unity and sovereignty continue to be embodied in the Monarchy, although this continues to be monitored during the succession period beginning in 1999. The new constitution paved the way for adoption of a "joint declaration of the administration and the political parties" prior to the November 1997 elections, whereby the previous transitional government was to ensure fair and transparent elections, while the political parties were to abide by the rules of the electoral process and its results.

[3] Excerpted from the World Bank Report No. P-7265-MOR, dated April 9, 1999

The Alternance Government's general economic and social program balances: (1) prudence in macroeconomic and fiscal management; (2) reforms to improve public sector performance; (3) measures to harness the potential for private sector-led growth; and (4) the need for broad-based human and social development, particularly in the country's least developed areas. The GOM has already sent important policy signals confirming its commitment to fiscal discipline. Shortly after assuming office, in the face of a widening 1997-1998 deficit, it took steps to contain the deficit to 3.5 percent of Gross Domestic Product (GDP). The 1998-1999 budget provided for a similar level of deficit (3.6 percent of GDP), despite pressures that might otherwise have raised it to nearly 5 percent of GDP. The GOM has also sought to reassure the domestic and international financial and business communities of its commitment to market-oriented policies, economic liberalism, and has shown continuity in taking forward the legislative agenda initiated by its predecessor – with good initial results.

Taken as a whole, the total economy of the Middle East and the North Africa region, as measured by Gross National Product (GNP), was approximately $510 billion in 1997, or slightly smaller than the economy of Spain. The region's average per capita GNP is only $2,624 compared to Spain's $14,350.[1] However, in Morocco a unique set of facts exist, including a strong agricultural economy, a vibrant and growing tourist industry, and a deregulated and therefore growing telecommunications and Internet infrastructure that could spur dramatic economic growth throughout the region. This economic growth could provide a dramatic improvement in the quality of life for Moroccans.

Following rapid growth in the latter half of the 1980s, the Moroccan economy has slowed since the early 1990s. In the late 1980s, growth was supported by a forceful adjustment program that devalued the Dirham, substantially reduced trade protection, and cut the fiscal deficit. GDP grew at an annual average rate of 4.4 percent, with non-agricultural GDP growth reaching over 6 percent in 1988 and 1990. These rates were achieved with relatively modest investment levels (around 23 percent of GDP), but with substantial increases in the efficiency of investment. Growth was also driven by exports, which grew at an impressive 9 percent per year of the period, with a strong surge in manufacturing exports. Meanwhile, foreign direct investment (FDI) also grew exponentially, from only US$1 million in 1986 to US$317 million in 1991.

The reduction in average annual growth to well below 3 percent in the 1990s partly reflects increased occurrence of drought, as well as slower growth in Morocco's principle trading partners. But it also reflects enduring structural problems. In the absence of deep-rooted sector and public management reforms, the fiscal deficit has remained around 3-4 percent of GDP. Meanwhile, public expenditure patterns have become increasingly rigid (with the government wage bill, together with interest payments, absorbing around 65-70 percent of revenues), to the detriment of public spending on infrastructure and the social sectors. Further, since the adoption of a nominal exchange rate peg of 1991 (whereby the Dirham's value was held fixed relative to that of a basket of trading-partner currencies), Morocco's currency has appreciated by about 15 percent in real terms, despite a substantial decline in inflation. Together with real depreciation in competitor economies, this appreciation has adversely affected export growth.

[1] Regional Trade and Investment Initiate Results Package, as revised July 8, 1999

Structural and institutional reforms have continued to be implemented in the 1990s, but arguably with less momentum than in the late 1980s. Tax administration has been improved, the financial sector has been deregulated and modernized, and a limited but successful privatization program has been implemented. Trade liberalization has also continued, most recently with the conclusion of an Association Agreement with the European Union (EU), which calls for the elimination of tariffs for all European industrial products over the next 12 years. The business environment for the private sector has also been improved, although structural constraints still inhibit firms' competitiveness, underscoring the need for profound institutional reforms.

Following the historic drought in 1995, GDP growth rebounded to 12 percent in 1996 but fell again to negative 2.2 percent in 1997, once more reflecting poor rainfall; agricultural value-added declined by 26 percent while non-agricultural growth held at around 3 percent. Tight monetary policy and low increases in import prices helped to reduce inflation from 3 percent in 1996 to 1 percent in 1997. In the balance of payments, the current account deficit improved to 0.3 percent of GDP (from 1.7 percent in 1996), reflecting faster growth in phosphate and jobbing trade exports, and slower growth in imports. Even more significantly, foreign investment more than doubled to an all-time height of almost US$1.2 billion as a result of large direct investment by multinationals and the sale of a major state-owned enterprise.

The fiscal stance has remained broadly unchanged since 1996. As noted above, the overall budget deficit stabilized at 3.5 percent of GDP in 1997-98, the same level as the preceding fiscal year. Both revenues and expenditures increased by about one percentage point of GDP in 1997-98, owing in part to higher tax revenues, the proceeds of a major electricity concession, and larger expenditure on the wage bill. Domestic financing of the deficit increased, which reflected a continuation of the Treasury's policy of tapping the domestic market in order to reduce its exposure to foreign debt, which had gradually declined from 55 percent of GDP in 1991 to 40 percent in 1996. The Treasury also began an initiative in mid-1996 to manage external debt more actively through private and public debt-equity conversion, refinancing, and pre-payment, which has amounted to about US$900 million of external debt. Non-government investment remained stagnant at 16 percent of GDP in 1997. Coupled with roughly stable government investment, this placed limits on growth potential.

IED Assessment Strategy and Objectives

Strategy

This Internet for Economic Development assessment was undertaken first from the perspective of examining the status of Morocco as the host country and secondly, examining those development-related initiatives already underway in Morocco, and reviewing documents on trade and investment initiatives in the Maghreb countries. This included research, discussions, assimilation, and summarization of the efforts already underway—not just those being undertaken by the U.S. Agency for International Development (USAID)—including U.S. initiatives, the World Bank, the European Union (EU), and the United Nations (UNDP and UN-ITU). Combined, these formed the foundation for the Assessment Team's efforts. A brief description of the more prominent initiatives can be found in the Addendum to this report.

Objectives

The overall objective of this two–week, in-country assessment was to allow USAID to assist the host government, private sector leadership and other stakeholders in promoting the broader and more rapid diffusion of information technology, Internet access and participation in the opportunities of e-commerce. Specifically, this is an opportunity for USAID/Morocco to acquire an assessment of how the potential of enhanced Internet connectivity can be realized. This assessment will:

1. Provide an opportunity for mission review of information technology capacity in Morocco and bring a focus to current activities that can be leveraged by e-commerce and other information technology add-ons.

2. Compile a list of non-governmental organizations and other interactive groups working within the context of the mission strategy statement that could benefit from recommendations relating to e-commerce and other Internet-based activities.

3. Provide a medium for government-to-government interactions that include the use of Internet-related programs for existing and future activities pursuant to the mission strategy and development portfolio.

4. Explain the kinds of business and regulatory laws and policies that would create the kind of legal and regulatory environment conducive to the rapid growth of e-commerce and other Internet-based activities.

5. Increase government and private sector knowledge about how the use of the Internet and e-mail can speed economic development in Morocco, with particular emphasis on a review of the private sector as it affects USAID's overall development strategy and implications for multiplying and leveraging positive development results.

6. Identify specific opportunities for inclusion in mission activities to increase their impact through the use of the Internet.

Part I—Government Policy Considerations in the IT Sector

Introduction

The Internet and electronic commerce is a broad and complex amalgam of technology, practice, and protocols that affect the way the private and public sectors do business. The Internet and electronic commerce are evolving rapidly and – to a great degree – unpredictably. Governments around the world are not blind to these trends. They are increasingly aware of both the benefits and challenges of the Internet and electronic commerce. The benefits of new jobs, products, industries, and greater efficiency within many existing industries surely outweigh concerns about tax-base erosion and national integrity and sovereignty over telecommunications networks and financial intermediaries. But the benefits cannot be enjoyed unless the challenges are managed.

The challenges that the Internet and electronic commerce present in the government domain leave policymakers scrambling to find the right recipe for managing change. On the one hand, since the Internet is so fluid, a laissez-faire approach is necessary. Private-sector initiatives should lead the development of the Internet/electronic commerce. On the other hand, a clear and consistent statement of the government's objectives will give guidance to the private sector and allow it to proceed with confidence. Government policies and regulation should be focused on the ultimate objective, and maintain a flexible, forward-looking, and technologically neutral stance towards solutions that achieve these objectives. Government intervention to enhance competition is appropriate when the private sector delivers not competitive results but rather collusion and restraints to competition.

A third dimension where the government and the private sector interact is in fostering familiarity with the Internet. The GOM can play a key role in helping private enterprise learn what other businesses and consumers are doing with Internet and electronic commerce, both within Morocco and around the world. The promise of the Internet and electronic commerce cannot be learned from a textbook or in a vacuum. The Internet is best experienced by actually participating and seeing how other market participants are using it. This learning process is very interactive. The GOM needs to enhance and encourage the use of the Internet to prepare businesses to launch their own inventions that meet best the needs of Morocco's consumers and businesses at home and Morocco's markets-to-be abroad. The full benefits from electronic commerce and the Internet will come only when the private sector can see its benefits, and starts to innovate in ways that neither they nor the government can now imagine. Consequently, demonstration projects used to create a foundation of familiarity and learning are critical.

A. Governmental Policy Considerations

The U.S. and the European Union (EU) offer two approaches for what role government might play in the development of an environment conducive to the use of the Internet and electronic commerce. The U.S. policy approach can be described as "the private sector leads, market forces guide, and the

government generally stays out of the way." The EU approach can be described as "the government guides, and the private sector responds using market forces." While much has been made of these differences, the similarities are greater than the differences. In both cases, it is presumed that there is a relatively well-developed private sector of businesses capable of using information technology to enhance existing business functions and to create new businesses. Also in both cases, it is presumed that there is a well-developed, transparent, and open marketplace. While this may be truer in the U.S. than the EU, the two markets differ little in comparison to an emerging economy such as Morocco, where the private sector accounts for a smaller percentage of GDP. Nevertheless, articulating these goals helps assess the current policy options and guide recommended changes.

The GOM, has four challenges to engage Morocco in information technology generally and electronic commerce more specifically:

- First, the GOM might be wise to dismantle that segment of the administration unfriendly to the market, e.g., streamline and make more transparent business regulations that discourage the development of a vibrant private sector;
- Second, the GOM should be encouraged to actively promote competition in infrastructure that is key to development of the Internet and electronic commerce, namely, telecommunications and the financial system. (These two objectives, while perhaps stimulated by the goal of promoting information technology growth, would have the salutary effect of enhancing economic activity more generally);
- Third, the GOM is encouraged implement a transparent, equitable tax system that encourages the use of information technology, as well as the profit-making potential of private businesses active in the information technology sector; and
- Fourth, because the Moroccan public and the private sector may remain unfamiliar with the potential of the Internet and electronic commerce, the GOM is encouraged to actively promote access and uptake of information technologies and the Internet through information dissemination, education, and pilot projects.

A key aspect of Internet and electronic commerce is the synergies among the challenges to government policies. Making progress on one of set of policies (e.g., business regulation), but little on another (e.g., telecommunication liberalization), will yield much smaller benefit and less progress than hoped for toward an Internet-enabled business and society. This is because Internet and electronic commerce are like an organism—complex, with internally interdependent systems. Many businesses originally believed that the Internet would only change their internal (back-office) operations, or only the way they market to customers. Business now understands that the Internet completely changes the business that they do, as well as the way they do it. Government policy is exactly the same. Government policymakers have often argued that they can only change certain policies at a time, and only step-by-step. The challenge to policymaking in the Internet area is to make fundamental policy changes on all fronts at once—to completely remake the business of government policy making. While the government will not "go out of business" if it fails in this policy challenge, it will forgo tremendous benefits of economic development for its citizenry.

B. Business Regulation and Promoting a Market-friendly Environment

1. Findings

A recent report by USAID/Morocco (Investor Road Map) as well as other reports by the Economist Intelligence Unit and anecdotes gathered during the assessment noted the difficult and *ad hoc* nature of the Moroccan business environment. Facilitators help companies through the opaque nature of initiating a company (domestic or foreign), but that company can still fall prey to frequent and capricious regulatory changes. Use of electronic commerce and the Internet by government generally results in greater transparency, consistency, and harmonization on regulations because the government usually puts such information up on a web site.

In a recent program by the Secretary of Post and Information Technology (SEPTI), the GOM is working to place information about all government ministries and departments online, including all business regulations. The GOM is also setting up public access to this information in regional and district government offices so that people without computers can use this site. The Wali of the Souss-Massa area is also interested in connecting his regional headquarters in Agadir to each of the region's five provinces and to two prefectures to give more remote government officials Internet access.

2. Assessment

Although use of electronic commerce and the Internet by government generally promotes transparency, not all ministries at all levels of government are convinced of the benefits of information sharing (and indeed, an individual bureaucrat's power could be constrained by the availability of information on the Internet). As an example, during the last week of September 1999 SEPTI scheduled another workshop on IT in Morocco, but it was unclear just a week prior to the event whether an important player (ANRT) would attend. In addition, small- and medium-sized enterprises, on which the burdens of *ad hoc* business regulation fall most heavily, often will not have a computer to check the consistency of laws and applications.

Moreover, not all problems with business regulation can be solved through transparency. Business regulation is also being used to support inefficiencies in the financial system. Under the current system, funds are deposited during the incorporation procedure and cannot be accessed to pay for the various fees required of the incorporation process. This effectively is a tax on the incorporation of a business and disproportionately impacts small- and medium-sized enterprises.

A final aspect of business regulation, which cannot be solved by transparency (and which will be addressed more completely in the section on financial system readiness) is the inconvertibility of the Dirham on capital accounts and the retention of 80 percent of export proceeds by the bank. Both of these regulations act as a tax on external transactions, with the retention requirement for exporters being the most obviously onerous, and with little or no benefit to the country.

C. The Financial System

1. Findings

The use of the Internet for electronic commerce poses two sets of issues for the financial system: 1) issues relating to the official role of the central bank and supervisory agency, including the interbank clearing system and management of foreign exchange reserves; and 2) issues relating to the commercial relationships between financial intermediaries and their customers, including the presence of domestic cartels.

2. Assessment

On the official side of the banking system, there are several weak spots in central bank operations and regulation that might be exacerbated by electronic commerce. The first is in the inter-bank clearing procedure. A bank that borrows substantial funds in the inter-bank market will develop "day-light overdrafts" to other banks. If this overdraft persists at the end of the day, the borrowing bank would need to access the central bank's "window" borrowing facility to avoid causing spillover effects on the lending banks and throughout the financial system. Because electronic commerce should enable more rapid buying and selling between businesses during the course of the day, the inter-bank market will have to support more transactions flow, and daylight clearing (also called real-time gross settlement), which would help prevent instability of the inter-bank market during the course of the day.

This problem is more acute for crossborder clearing. Because the Dirham is inconvertible, purchase and sale "invoices" probably cannot be consummated in real time. That is, a cross-border "purchase" transaction that requires foreign currency probably will not clear until night-time, so the seller cannot send the product until the next day, after the payment has cleared. When the "product" is, for example, downloaded software, clearly one of the benefits of electronic commerce—rapid business response—will be undermined.

Second, electronic commerce could create excess demands on foreign reserves. Just as in the case of a "daylight overdraft " in the domestic interbank markets, foreign exchange exposure could build up during the day on account of transactions made but not cleared in real time. For example, suppose that large purchases are made during the day by an importer, who needs to pay in a hard currency, such as in Euros or US dollars. Such purchases could create an excessive demand for hard currency, beyond what the central bank has available or wishes to make available. The central bank could find itself exposed to excessive demands on their foreign currency reserves when the batch of external transactions is cleared. Electronic commerce opens the possibility for more rapid and monetarily more significant crossborder trade, thus making central bank management of foreign exchange more challenging. The Office de Change recognizes the possible constraint on importation, and believes that stored-value-card technology could solve the problem of daylight exposures. An importer would be allowed to place a certain amount of foreign exchange on a smart card, and then would be able to debit the card during the day as needed. The technology of using a stored-value-card on the Internet is being

tested, but is not yet on the market. Nevertheless, this technique could make crossborder transactions more fluid than at present.

A third issue is that the central bank retains 80 percent of the foreign exchange earned by exporters when they return their earnings for deposit in domestic banks. This retention provides the central bank with working foreign exchange reserves. To the extent that electronic commerce makes it easier for exporters to deposit funds into banks outside Morocco, the funding of these official foreign exchange reserves could be undermined. While there are numerous well-established means for keeping export earnings out of a country with such a retention requirement (under-invoicing of exports), electronic commerce could make it easier and more difficult for the government to track currency flows. Regardless of the rationale for this retention, it simply does not recognize that exporting often requires substantial importing costs—more than 20 percent of the value-added process. Further integration into the global process of value-added creation will require elimination of the retention arrangement.

Fourth, to avoid undue and potentially volatile demands on the foreign exchange reserves, the Moroccan capital account is not "open," meaning that individuals or businesses cannot freely buy foreign currency in order to make financial investments abroad. Electronic commerce makes it difficult, if not impossible, for the central bank to "tell" which of the transactions it is clearing for trade in goods, for which foreign exchange is made available, versus trade in financial products, for which foreign currency is not available. For example, if a firm makes a purchase using its stored-value card, its ISP (or the ISP of the firm running the financial element of the Web site) is the conduit for transactions abroad, first connecting to a domestic bank that then clears through the central bank. The ISP will not know whether the transaction going through its network is for purchases of a computer from abroad or to buy a US Treasury bond. So, electronic commerce might make it more difficult to keep the capital account of the balance of payments "closed."

The commercial bank environment appears to be insufficiently competitive and not yet technologically prepared to use electronic commerce. Moroccan law mandates that all commercial banks belong to one bankers' association, the Groupement Professionnel des Banques du Maroc (GPBM), which meets regularly and presents policy positions collectively (after a consensus vote) before the Moroccan government. For the last five years this association has not voted on interest rates or lending requirements, but opportunities for more informal collusion on these issues through GPBM still exist. Moreover, there seems to be relatively little lending activity, suggesting a sleepy, protected set of financial institutions. This is not an environment where financial institutions actively promote electronic commerce either as a tool to reduce their costs or as a way to compete for customers and increase their competitive edge in the marketplace.

Electronic commerce cannot flourish in Morocco without the ability to buy products and services online. The vehicle commonly used for making online purchases is a credit or debit card; the technology for using stored-value cards is only in the testing stage (the card plugs into an attachment to the CD drive). Credit and debit card penetration is relatively low in Morocco. Currently, four Moroccan banks issue credit/debit cards with Visa or MasterCard logos (BMCE, Wafabank, Interbank, BCP), but in the future these banks will only offer cards through GPBM and not individually. This will tend to eliminate

interest-rate competition between different credit cards in Morocco, which again is evidence of a non-competitive banking sector. Moreover, the credit cards do not guarantee cardholders protections that similar cardholders have in the United States (such as limited liability for lost or stolen cards). Stored-value cards are more prevalent, in part because the need for physical presence suggests better security features (although if such cards can be "topped-up" with money from an automatic teller machine (ATM) they do offer a different type of security problem. Moreover, in Morocco the cards still are principally single purpose (e.g., Afriquia's gas station cards). Therefore the stored-value card is not yet a viable tool for e-commerce transactions. Nonetheless, one company responsible for creating electronic means of payment, S2M, thinks that electronic commerce in Morocco can flourish with the widespread dissemination of stored-value cards.

The GOM's approach to the structure, conduct, and performance of institutions in the financial marketplace will be important for whether this sector initiates a virtuous or vicious cycle of electronic commerce development. On the one hand, uptake of electronic commerce creates a positive synergy whereby firms actively embracing electronic commerce will become more competitive, gain market share, and improve the functioning of the financial system, with ongoing gains to the whole economy. Studies on industrial country banks show that the cost of banking transactions over the Internet are one-tenth the cost of transactions using bricks, mortar, and paper. Moreover, the ability to use the Internet to advertise services and offerings, as well as to collect and process information on a borrower enhances the efficiency by which a financial sector transforms savings into investment in an economy. Reducing these costs is essential to enabling small- and medium-sized enterprises (SMEs) to obtain finance. Finally, the institutions themselves can use the Internet to upgrade their capacity to offer electronic banking services (e.g., bill payment) to their borrowers. The institutions that utilize electronic commerce will have lower costs of funds and a greater diversification of the lending assets. In addition, these firms can gain technical assistance from institutions abroad that are also using electronic commerce technology. While Morocco's financial institutions are a long way from these goals, the direction of movement correlates with the benefits to be obtained.

On the other hand, if cartel behavior is maintained, then banks will be a stumbling block for electronic commerce development. The cost of finance to firms and the range of financial offerings will be lower than in the environment of competition. One approach to competition policy is to inject competition by allowing foreign institutions to compete through new facilities, or, alternatively, by allowing majority shareholding in financial institutions. Foreign ownership of financial institutions is currently limited to 49 percent. It is well known that such limited ownership does not lead to active foreign investment or the adoption of new management styles.

The GOM is planning to privatize two banks, Banque Centrale Populaire (BCP), and Credit Immobilier et Hotelier (CIH). These two institutions, BCP and CIH, are retail and for a specific purpose, respectively. In the first case, majority foreign participation is unlikely because retail banking is primarily a local business (although Citibank might attempt it). A foreign real estate conglomerate might buy CIH. Neither is likely to invigorate Moroccan finance or change the sector's attitude toward electronic commerce.

A key additional issue, however, inhibiting greater use of technology by banks, is labor law. For firms to get the full benefit of technology, they need to restructure labor within the organization. Labor laws are a very important impediment to accomplishing such restructuring. This issue points out the cross-cutting nature of the policy issues facing the GOM where the common thread is technology.

Non-bank financial institutions, particularly the operations of the Moroccan stock exchange in Casablanca, also will be significantly affected by electronic commerce. Indeed, with electronic quotation, centralized settlement and clearing, and an oversight agency (CDVM) committed to increased transparency of operations, the Casablanca Stock Exchange (CSE) could become the exemplar of electronic technology and perhaps of openness as well to the rest of the Moroccan private sector. Since 1998, all trading on the CSE has been completely electronic, and Moroccan and foreign investors can purchase shares from a broker over the Internet. However, brokers then take all orders to the CSE and place them over a special computer terminal in the CSE building. There is a plan underway to allow brokers to buy and sell directly from the computers in their offices, and the next step could be fully integrated online trading.

Nonetheless, the CSE has yet to become a viable vehicle for raising equity for the Moroccan private sector. Only 56 companies are now traded on the CSE, and capitalization requirements and audited financial statements bar many newer and smaller companies (such as those in the IT sector) from taking advantage of equity-raising through initial public offerings (IPOs). While the requirement that listed companies have three years of audited financial statements contributes importantly to improved accounting procedures and much needed corporate transparency, there should be a way to use the equity markets as a funding vehicle for SMEs.

One possibility proposed by market participants is to create a "second tier" market where stocks of companies with less of a corporate history could be officially recognized. If such companies were in some way vetted by CDVM (for example, as regards to their audited statements), then mutual funds could develop that could create a portfolio of the "recognized" firms. The concept of the mutual fund was just developed in 1995, yet already there are 103 mutual funds managed by 15 brokers that offer different combinations of all stocks, all bonds, and diversified instruments. So the mutual fund is a popular investment vehicle for Moroccans.

Adding a further diversification possibility of "second tier" companies would offer more funding possibilities to emerging companies, as well as give investors new opportunities to invest in Morocco. The representative of the Office de Change noted that one reason for the convertibility law is to "keep Moroccan savings at home." If good investments are available at home, Moroccans will invest domestically regardless of the currency's convertibility. Representatives of CDVM noted that many bond and stock issues are 10 and 15 times oversubscribed, and that people often pay with cash. Thus suggests a great demand for non-bank financial assets on the part of the population (it also suggests, further, a non-competitive banking system).

There is no limit on foreign participation in the stock exchange, yet foreign participation has been relatively thin—only about 5-8 percent of market capitalization—perhaps because it is difficult to buy

into Moroccan firms. The privatization program has used the stock exchange to raise funds, and a revitalization of the privatization program could engage new foreign investors to the exchange. Moreover, the International Finance Corporation (IFC) lists Morocco in its composite index, which has promoted investor interest.

In the future, electronic commerce (combined with capital risk insurance) can underpin a new approach to lending to SMEs that brings together the bank and non-bank financial sectors. Often lending to SMEs is viewed as too risky and too costly (too much hard work) for banks, so lending to these companies often lags without directed credit from the government. A new approach that uses the power of electronic commerce is the securitization of small-business assets (securitization is the packaging of SME loans into securities that then can be sold as shares in a mutual fund). Electronic commerce reduces the cost of servicing SME loans, and securitization is a way to diversify risk. Both the bank and the non-bank sectors become involved—the bank to originate and service the loan and the non-bank firm to package and sell the asset.

D. The Tax System

1. Findings

The current structure of Morocco's tax system is quite fragmented, which raises administrative costs and reduces transparency. Moreover, the current system depends on revenue sources that can be undermined by the growth of electronic commerce, particularly the value-added tax (VAT) and tariffs. Indirect taxes via the VAT account for 30 percent of revenues, which is about the average typical for a EU country. Revenues are highly dependent on trade taxes (tariffs), which account for 15 percent of revenues. Direct taxes, which electronic commerce will affect as well (although in somewhat different ways than the VAT), account for 25 percent of revenues. Finally, the fragmented nature of the tax system is evident from the observation that the rest of revenues are raised through a hodgepodge of sources and transactions: 11 percent from energy and 4.5 percent each from stamp and excise taxes, SOEs, and "other."

2. Assessment

Greater use of the Internet and promotion of electronic commerce will challenge the GOM's current tax and tariff system as well as the administration of the systems. However, more streamlined systems that use the Internet will greatly enhance the efficiency and transparency of generating government revenue, which will also improve the environment for business and trade.

Taxes on electronic commerce transactions raise three issues: 1) jurisdiction of the tax authority, 2) identity of a taxpayer, and 3) appropriate categorization and coverage of goods vs. services (in the case of VAT) and of income and capital (in the case of direct taxes). Electronic commerce promises to blur the international borders of transactions, blur who engages in the transactions, and blur what kind of transaction it is. These questions have fully engaged the tax authorities in the most advanced nations, so in no sense is Morocco "behind" in its treatment of these issues. Indeed, the GOM has the potential to benefit from the analysis of other groups (OECD, EU), leap-frog intermediate stages of tax

development, and use electronic commerce to bring its tax administration into compliance with Model Tax Laws as they are developed. Moreover, GOM has already implemented Internet systems for the administration of import tariffs, although how well those systems operate in fact is somewhat unclear.

Several ongoing changes in the Moroccan economy, particularly when combined with electronic commerce put a premium on having tax treaties with other countries, or at minimum having close collaboration among tax authorities. First, as Morocco privatizes state-owned operations and as they increasingly become part of the value chain of multinationals (e.g., autos, apparel), crossborder trade will increase, as will the issues associated with location of value-added and transfer-pricing. VAT rules have always been difficult to apply when transactions cross the border, and electronic commerce offers easier ways to engage in transfer-pricing that arbitrage tax differences, particularly when tariffs are the type of tax involved.

Second, electronic commerce blurs the distinction between trade in goods and services. The EU has proposed that all electronic commerce should be taxed as a service based on the location of the consumer (instead of the "place of supply"). This may or may not be workable in the future as bundling of services, as well as the provision of near-goods (for example, downloadable software), through the ISP become more prevalent. Indeed, the representatives of the Office de Change noted a test case ongoing with the Customs department on the issue of whether downloaded software was a good or a service.

Third, the privatization and development of a vibrant private sector of SMEs in Morocco means that tax efficiency is critical. VAT requires a taxpayer ID for all transactions, "double-entry" accounting for inputs and outputs, and special treatment for imports and exports. It is an administratively intensive system that depends on computerization to keep the tax rates low. Low tax rates are critical to minimize distortions and evasion. In contrast, Morocco's current system of fragmented and specific taxes invite evasion and promote distortion, leading to tax inefficiency.

The GOM's high dependence on tariff revenue deserves special attention. Although the Customs department has a computerized administrative system (the SADOC system) it apparently has not done very much to streamline the administrative process. More generally, the very high average tariff rate of 24 percent (ranging from 2.5 to 35 percent) invites transfer-pricing and distorts economic development. While transfer-pricing is one way of avoiding tariffs (and apparently it is widely used), it is not legal. Furthering an environment where flouting legal requirements as the way to efficient business practices should not be an accepted as the way to encourage trade and development.

A representative of the Customs department indicated that e-commerce only changes the location of taxation – from the border to inside the border, and from application on the good or service, to the application on the earnings of the corporation in question. It is interesting to note that most Customs departments around the world have shown much greater concern about how e-commerce will potentially erode tariff revenues.

The prospects for a Euro-Med free trade zone will give preferential treatment to Morocco-EU trade. This should increase trade flows but will likely reduce overall tariff revenues. The GOM should be wary of responding to this potential shortfall by raising tariffs on trade with other countries. Introducing distortions in trade across different regions can be particularly distortionary and inefficient.

To encourage information technology, the Internet, and electronic commerce, the GOM should immediately sign the *Information Technology Agreement I* and commit to zero tariffs on information technology products by 2002.

Electronic commerce, while presenting the GOM with tax administration challenges, also offers solutions. It is much cheaper to keep track of taxpayers electronically. Electronic identifiers, audit trails, and value-added accounting are significantly eased by information technology. The World Customs Organization is working with business and governments to use information technology to streamline and make electronic information on trade flows as well as trade taxes. As the character of Morocco's economy changes, the GOM should not squander the opportunity to use the power of information technology to extend tax coverage, reduce tax rates, and increase tax efficiency.

The tax authority recognizes that the administrative costs of this regime are quite high. It also recognizes that use of the Internet in its internal operations would significantly improve tax administration. Finally, it is quite responsive to the possibility of online filing of taxes by corporations and business. The authority is so convinced of the administrative benefits of the Internet that it might even consider giving a small tax rebate to people filing taxes on-line. Of course there are two impediments to greater use of the Internet in the tax administration. First, those inside the tax administration are unfamiliar with the computer and training is needed. Second, online filing presumes that a credit/debit/or SVC can be used.

Part II—Telecommunications Infrastructure

Introduction

Over the past few years, the Government of Morocco (GOM) has undertaken a number of reform initiatives aimed at liberalizing its telecommunications, post, and information technology sectors. These largely sprang out of Law 24-96, which was passed in August of 1997. A Letter of Sector Development Policy, which resulted from Law 24-96, articulates the Kingdom of Morocco's reform program in the Telecommunications, Post, and Information Technology Sectors and serves to inform the reader of key strategies, objectives, and progress already achieved—and the in-country setting upon which the IED Assessment took place.

Assessment and Findings

One of the major reasons for Morocco's success in liberalizing its Telecommunications Sector has been financial assistance from the World Bank. For the past several years the Private Sector Development and Finance Department, Middle East and North Africa Region of the World Bank has been working with the government of Morocco in an effort to liberalize their telecommunications sector. This has included making a US$ 101 million Telecommunications, Post, and Information Technology Adjustment Loan (TPI-TAL) to assist in this transition. Quoting from the World Bank's report:

> *"The TPI-TAL is aimed at supporting the overall objective of the Government reform program to accelerate Morocco's integration into the global information economy. Access to competitively priced and efficient communications services and information technology (IT) determines to a large extent the ability of economies to grow, create jobs, and reduce social disparities. The service sector, which is heavily dependent upon communications and IT, accounts for an increasing share of GDP inmost economies, while the IT industry itself is emerging as a major source of growth, job creation, and export earnings in those economies. Adequate provision of telecommunications, postal, and IT services to poor and remote households also constitutes a powerful means to reduce social exclusion and to broaden the scope of economic opportunities provided outside of the main cities."*
>
> *The "…operation supports the adoption of measures in six specific areas:*
> *(i) telecommunications liberalization; (ii) telecommunications regulation;*
> *(iii) privatization of the incumbent telecommunications operator;*
> *(iv) access to telecommunications services by poor and remote households,*
> *(v) competitiveness of postal services; and (vi) development of a national IT strategy."*

The objectives of the loan are to "…support the implementation of a comprehensive package of pro-competitive reforms in the telecommunications, post, and information technology (IT) sectors designed to increase the competitiveness of the Moroccan private sector, to broaden access to communications services to the poor, particularly in rural areas, and to facilitate Morocco's transition to a global, information-based economy. In telecommunications, the primary objective of the load is to promote increased competition, greater private participation and investment, and autonomous regulation. With respect to postal services, the operation seeks to increase the competitiveness of service provision and to ensure that the public service obligations are adequately defined, financed, and met. The law also supports the development of a national strategy aimed at facilitating Morocco's integration into the global information society." [1]

The target benefits of the loan state that, "[t]he Moroccan private sector will be the major beneficiary of competitive telecommunications, post, and IT services. The service industry, in particular, which accounts for an increasingly important share of the GDP in most developing economies, stands to benefit from a broader array of competitively priced communication and IT services. The project will address some of the needs of the poor and remote households by increasing their access to communications and IT services, a critical factor for developing local economic activities. In addition, the reforms supported by the loan will bring substantial revenues to the Treasury (higher taxes levied on enlarged telecommunications and IT sectors, the ward of a new telecommunications licenses and the privatization of the incumbent telecommunications operator)."

1. Current Status

Whereas the above reflects the plans, at the time of this assessment, many of these plans have already been implemented. In July of 1999 a second GSM license was issued, bringing a price of US$1.1 billion to the GOM, US$0.7 billion more than originally estimated. Current regulatory schedules are to issue the VSAT tender in the latter part of CY 1999. Privatization of Itissalat al-Maghrib (IAM), the incumbent operator, is currently scheduled for summer of 2000.

Teledensity—Regarding telecommunication coverage in Morocco, here, too, the pace of expansion has been considerable, recognizing the low base from which these increases are taking place. A recent publication from the International Telecommunications Union (ITU), "Challenges to the Network, Internet for Development"[2] outlines the following picture in Morocco (1997 data).

- Total population: 27.52 million
- Population density (per square km): 42

[1] World Bank Report No. P-7265-MOR, dated April 9, 1999

[2] Challenges to the Network-Internet for Development. International Telecommunications Union. (February 1999). A second edition is scheduled for release in October 1999.

- Total GDP: US$36.7 billion
- Per capita GDP: US$1,350
- Total phone lines: 1.375 million
- Teledensity: 5 (per 100 population)
- Number of Internet Hosts: Jan96=230; Jan97=470; Jan98=1,409; Jan99=1,994 (Change 1997-1999: 41.5%)
- Internet Host Density: Jan96=0.09; Jan97=0.17; Jan98=0.51; Jan99=0.72 (CAGR 1994-1998=526.8%; Change 1997-1999=41.5%)
- Main Telephone Lines: 1990=.403B; 1997=1.375B (CAGR 1970-1997=19.2%; Change 1996-1997=8%)
- Main Telephone Lines Teledensity: 1990=1.65; 1997=5.0 (CAGR 1990-1997=17.2%; Change 1996-1997=8.5%)

With respect to the number of PCs in Morocco, the ITU report does not provide data for Morocco. It is estimated that there are approximately 70,000 PCs sold in 1999, with 14 percent being replacement PCs. An estimated 50 percent of these PCs are assembled incountry by a number of small local original equipment manufacture (OEM) firms.

Discussions with a wide array of both private and public sources during the course of this Assessment reflect a total Internet user community in Morocco of somewhere between 40,000 and 50,000. Estimated number of actual Internet accounts is thought to be substantially lower at around 20,000 to 30,000. These are provided by a number of independent ISPs providing value-added services from IAM's infrastructure. It is estimated there are between 130-300 ISPs.

Itissalat al-Maghrib (IAM)—Until recently, the monopoly provider, IAM, did not provide its customers with ISP services. Instead, it encouraged and supported these value-added services by the private ISP community in Morocco. This arrangement was typically carried out via a series of informal arrangements that dated back to when there was a single Postal Telegraph and Telephone (PTT)—ONTP. With the move toward privatization it is clear the new IAM views the ISP market as something in which they wish to enter. In entering this market, IAM has leveraged their monopoly position to lower prices to a level that is below their costs in order to gain market share. In addition, they also have reversed an earlier agreement with the ISP community whereby a local call rate was available to all ISPs for accessing the Internet throughout Morocco. This is now available only to IAM customers. On the current track, IAM has the potential to severely restrict the growth of the private-sector ISP sub-sector by unfairly leveraging its monopoly position. At present there is no law or regulatory capability to prohibit such actions.

Agence Nationale de Reglementation du Secteur des Telecommunications (ANRT)—With the breakup of ONTP, an independent regulatory agency was put into place—ANRT. This Agency has aggressively led the charge to bring about a competitive telecommunications market in Morocco. The ANRT has grown from approximately 30 to over 150 personnel during this last year. Because the breakup of ONTP was largely crafted by what later became IAM, the legislation creating ANRT has restrictions as to how much it can restrict IAM's behavior relative to limitations on its leveraging its

dominant and monopoly position. As a result, the ANRT's first priority is to introduce competition into the marketplace (e.g., the second GSM license, near-term VSAT tender and licensing, GMPCS, etc.). This strategy leverages the marketplace and extends the scope of influence ANRT can exert in the telecommunications sector as it has full authority over the new entrants. ANRT's plans are to focus on seeking to revise legislative authorities with respect to IAM, once it has completed its major efforts to introduce competition into the marketplace in Morocco.

2. Missing Pieces

A tremendous amount of progress has been made in recent years in Morocco; the Telecommunications Sector has been liberalized in record time. While there continue to be privatization efforts underway, the real work is in the infrastructure build-out itself and the subsequent expanded use. The current community of up to 50,000 Internet users in a population of nearly 30 million is small even though growth rate is encouraging. While the second GSM operator will expand telephony, these technologies are not adequate for Internet other than simple e-mail use. The upcoming VSAT tender could open this market up considerably, but there are a number of questions regarding local access to these services, as IAM will still control the local loop. Also, the population of PCs simply needs to grow more before critical mass will likely be reached in country.

Conclusion

Morocco's Telecommunications Sector is undergoing rapid transformation under the direction of ANRT. This started with the breakup of the PTT (ONTP) into three separate units (regulatory, telecommunications and post), and has progressed such that competition has been, and is increasingly being brought into the market place—first via the licensing of the second GSM operator, and second in the near-term with the granting of licenses for VSAT operators. The privatization of the IAM is scheduled for the year 2000, with efforts already underway. The speed and comprehensiveness of this liberalization effort is perhaps unparalleled and could well become a model for other developing countries in the region seeking to liberalize their telecommunications sectors.

Part III—Legal and Regulatory Reform Introduction

Countries wishing to fully realize the full potential of e-commerce generally have a predictable legal and regulatory environment that governs transactions. In addition, a country's legal and regulatory framework should be encouraged to achieve a balance between a nonregulatory, market approach that encourages e-commerce transactions and regulatory approach designed to protect those involved in e-commerce.

This section of the assessment provides an overview of Morocco's current legislative system, highlights those areas of Moroccan law and regulation that currently affect the development of e-commerce in Morocco, and provides recommendations based upon interviews with various representatives of Morocco's private and public sectors.

A. The Legal System in Morocco

Morocco has a democratic, constitutional monarchy. The legal system is based on Islamic law and French and Spanish civil law systems; judicial review of legislative acts takes place in a Constitutional Chamber of Supreme Court.

B. Information Technology and Legal Reform

Electronic commerce is the fastest growing segment of the world's economy.

Commerce on the Internet could total tens of billions of dollars by the turn of the century. For this potential to be realized fully, governments will need to adopt a nonregulatory, market-oriented approach to electronic commerce, one that facilitates the emergence of a transparent and predictable legal environment to support global business and commerce. Official decision-makers do well to respect the unique nature of the medium and recognize that widespread competition and increased consumer choice should be the defining features of the new digital marketplace.

However, many businesses and consumers are still wary of conducting extensive business over the Internet because of the lack of a predictable legal environment governing transactions. This is particularly true for international commercial activity where concerns about enforcement of contracts, liability, intellectual property protection, privacy, security and other matters have caused businesses and consumers to be cautious.

As use of the Internet expands, many companies and Internet users are concerned that some governments will impose extensive regulations on the Internet and electronic commerce. Potential areas of problematic regulation include taxes and duties, restrictions on the type of information transmitted, control over standards development, licensing requirements and rate regulation of service providers. It is important to preempt these harmful actions in governmental regulation before they take effect and become imbedded into the regulatory system.

The promise of the Internet and its contribution to the growth of the world's economy can only be sustained if governments create legal structures that nurture, rather than inhibit, the growth of electronic commerce.

Morocco can have a profound effect on the growth of its commerce on the Internet. By its actions, it can facilitate electronic trade, both internally and externally, or inhibit it. Knowing when to act and – at least as important – when not to act, will be crucial to the development of electronic commerce in Morocco.

C. Legal Reform Underway in Morocco: Findings and Conclusions

From the date that the Moroccan government inaugurated its first Web site in July 1996, the Moroccan government has recognized the profound affect that information technology has had and will have upon the world as a whole and that information technology will affect all of the important aspects of society such as culture, education, public services, employment, and the economy. As such, the government of Morocco, in August 1997, created the National Agency of Telecommunication Regulation (ANRT), which has been granted the authority to promulgate regulations on telecommunications and encryption. This agency reports to the Prime Minister and views itself as a "think tank" for all other aspects of information technology and e-commerce that are not contained within its specific enabling statute.

In addition, the Secretary of the Post and Information Technology (SEPTI) has established a commission that reports directly to the Prime Minister to guide and advise the Government on the various legal and regulatory reforms that may be needed so that Morocco may participate more fully in e-commerce and information technology. This commission is in the process of developing an information technology plan for Morocco that will include:

- Preparation of a regulatory framework relative to electronic commerce, domain names and encryption;
- Development of a national system of assigning domain names;
- Commencement of a tele-education project with UNESCO, UIT and other ministerial departments;
- Participation of Morocco in ITU's Electronic Commerce for Developing Countries;
- Commencement of Morocco's current utilization of information technology;
- Participation of Morocco in the EUMEDIS initiative;
- Participation of Morocco in the Governmental Advisory Committee on Internet domain names; and
- Organization of a September 1999 workshop for government and industry on barriers to e-commerce.

Finally, Morocco's Ministry of Industry, Commerce and Artisans' Department of International Trade Relations has also created an Information Technology committee made up of private and public sector representatives to evaluate those changes required for Morocco's full participation in e-commerce.

1. Leadership of the Private Sector

Morocco should encourage industry self-regulation wherever appropriate and support the efforts of private sector organizations to develop mechanisms to facilitate the successful operation of the Internet. Even where collective agreements or standards are necessary, private entities should, where possible, take the lead in organizing them. Where government action or intergovernmental agreements are necessary, on taxation for example, private sector participation should be a formal part of the policy making process.

Morocco's private sector recognizes the benefits to be derived from Morocco's full participation in e-commerce. Many representatives of the high technology industry accept that the Moroccan government is moving in the right direction with regard to the Government's re-evaluation and reform of existing laws and the Government's creation of new agencies (ARNT) and commissions. But the private sector does not believe that Morocco is making the necessary changes and adaptations fast enough.

For example the Moroccan chapter of the Business Software Alliance (BSA) has drafted a revision to the current copyright law that was last modified in 1970 and does not currently encompass software protection. As part of the currently proposed draft legislation, BSA addressed the issue of software protection. BSA presented this draft to the Government in 1998. To date, this law has not been passed.

The private sector in Morocco cited another example of slow progress in the area of telecommunications. Although the Moroccan government has undertaken a number of reform initiatives aimed at liberalizing telecommunications, post and information technology, a number of Internet service providers (ISPs) may be forced out of business in the immediate future due to the IAM's current monopolistic practices. It is obvious from the interviews conducted that IAM is attempting to gain as much market share as possible prior to the completion of the privatization process.

The private sector has taken the initiative to create associations that provide guidance to the private sector in the area of best management practices and the retraining of managers in areas of new technology. In addition, these associations are responsible for lobbying the government for legislative reforms that the private sector views as required for Morocco to successfully participate in the high technology industry and e-commerce.

On the whole, the initiative and actions taken by private industry in Morocco are positive steps towards Morocco's full participation in e-commerce. Based upon various interviews, however, it became apparent that many of these associations were not aware of the existence of other such organizations or the government commission that had been created to address information technology issues.

2. Government Restrictions on E-Commerce

As in other parts of the world, Moroccans should be able to enter into legitimate agreements to buy and sell products and services across the Internet with minimal government involvement or intervention. Unnecessary regulation of commercial activities will distort development of the electronic marketplace

by decreasing the supply and raising the cost of products and services for consumers the world over. Business models must evolve rapidly to keep pace with the breakneck speed of change in the technology; government attempts to regulate are likely to be outmoded by the time they are finally enacted, especially to the extent such regulations are technology-specific. Accordingly, Morocco should refrain from imposing new and unnecessary regulations, bureaucratic procedures, or taxes and tariffs on commercial activities that take place via the Internet.

As stated above, the Moroccan government recognizes the importance of the high technology industry and e-commerce to Morocco. However, government officials are approaching legislative reform cautiously. In some cases, such as encryption, such caution may be necessary as international standards for encryption are currently being developed by international organizations such as the United Nations Center for International Trade and Development and others.

Based upon the interviews conducted with both private and public sector representatives, the assessment team is unaware of any pending or proposed legislation that would place restrictions on e-commerce.

3. The Moroccan Legal and Regulatory Environment

Regulation should be imposed only as a necessary means to achieve an important goal on which there is a broad consensus. Existing laws and regulations that may hinder electronic commerce should be reviewed and revised or eliminated to reflect the needs of the new electronic age.

Based upon the interviews conducted, it is apparent that the Moroccan government's intervention is needed in a number of areas to support and enforce a simple legal environment for e-commerce.

E-Commerce Definitions

In accordance with the manner in which Morocco's Law No. 24-96 (the 1997 reform of Morocco's telecommunications and post office regulations) was drafted, the first step towards a predictable, minimalist, consistent and simple legal framework for e-commerce will be to define the various steps and participants involved in an e-commerce transaction. Such definitions may be as simple as defining an "agreement" to be "the bargain of the parties in fact found in their language or inferred from other circumstances…" to a more complex concept such as the definition of an "automated transaction."

Intellectual Property Protection

The ability to transmit and receive large amounts of information electronically makes copying simple and cost-free. Authors and creators of intellectual property may not be compensated when their works are copied. Morocco's law needs to implement the protections contained in the World Intellectual Property Organization Copyright Treaty and Performances of Phonograms Treaty. Protection of intellectual property is necessary to encourage further creative acts and the disbursement of such acts through e-commerce.

During the course of the assessment, it became clear that that Morocco's current copyright law provides insufficient protections for the private sector and did not address the protection of software. Although companies such as Microsoft have taken court action to enforce their rights in their property through Morocco's trademark laws and been successful, the penalties contained in Morocco's current cadre of intellectual property law are insufficient to provide long-term, effective deterrence of the theft of intellectual property. Morocco needs to reform its intellectual property protection to be in accordance with international standards so that the high technology industry will look more favorably upon Morocco as a country in which to set up business.

Contract Law and E-Commerce

Both the private and government sector expressed an opinion that Morocco's current laws relative to contract formation and performance were adequate if e-commerce were not part of the equation. Morocco has recently established a new commercial court system and is providing training to judges on commercial law. Lawsuits in this area are now being processed through the Moroccan legal system in an expeditious manner.

However, Morocco's current law does not recognize electronic signatures therefore the validity of any contact entered into electronically is questionable. In addition, electronic payment is currently impossible in Morocco. For a supplier to receive payment on a credit card transaction, the supplier is required have the customer sign an invoice and provide the bank with a paper copy of this invoice prior to receiving payment. To successfully participate in e-commerce, the Moroccan government will have to reform these laws to provide for legally recognizable electronic signatures and electronic payment.

Encryption

Encryption is a necessary tool to achieve better protection of confidential information that is sent over the Internet. It is also necessary to provide security for payments made through electronic commerce. The ability to provide encrypted information over the Internet is required in order to provide greater confidence in the confidentiality and security of electronic transactions.

When Morocco established the ANRT it gave to the ANRT, as part of its of its charter, the responsibility for drafting Morocco's encryption laws. The ANRT is currently drafting this law such that the draft legislation submitted to the government will agree with internationally accepted parameters.

Privacy

The ability to gather and disseminate information electronically has risks as well as benefits. Children are particularly susceptible to requests for information.

Individuals are not likely to participate in e-commerce when personal information may be acquired and disseminated without restriction. Information circulated on the Internet is reasonably accessible to anyone. Whenever an individual visits a Web site, software allows the web site to collect data without the individual being aware of the collection. In addition, the collection and exchange of certain types of personal information may be necessary for various commercial purposes. However, this information may be accessible by others, and unauthorized access to personal information may result in the receipt of many unwanted e-mails (SPAM) or the theft of an individual's identity.

To encourage Morocco's participation in e-commerce, Morocco needs to enact legislation that will protect the personal information of those individuals who choose to participate in e-commerce.

Content

Content is generally defined as the collection of information found on a Web site. This information may originate either at the Web site or on the machines of individual users. A question to be addressed is who is legally responsible when the information displayed may be illegal or immoral? Similarly, who will be legally responsible for the violation of an intellectual property owner's copyright?

Morocco does not currently have laws that limit content or assign liability.

Technology Crimes

The Internet is accessible to millions of people worldwide. It is used by the public and private sector to transmit confidential and privilege information, both internally and externally. Acts of fraud, piracy, sabotage, espionage, and vandalism occur on a frequent basis. To address such issues, Morocco is encouraged to draft legislation that defines rights and responsibilities as well as provides sanctions against those who engage in such crimes over the Internet. Such a law would provide for government intervention when necessary to reach the criminal responsible for such acts.

Monopolistic Practices

As one final barrier, the monopolistic practices of Morocco's former government-owned telephone company (IAM) and other such businesses whose goal may be to capture the Moroccan market through anti-competitive practices should be examined. Based upon the information collected during our interviews, it appears that IAM is currently grabbing for market share at the expense of ISPs that previously were regulated by IAM. IAM has arbitrarily changed the terms and conditions of contracts it entered into with ISPs and is now competing directly with the ISP's it originally regulated on more

favorable terms than those granted to the ISPs. If IAM continues with this type of behavior, the most likely result will be that Morocco's 200 ISP's will be reduced to one ISP, which in turn will be IAM.

4. The Unique Quality of the Internet

Government regulation is appropriate to foster transparency, support commercial transactions, and encourage dispute resolution. In some areas, government agreements may prove necessary to facilitate electronic commerce and protect consumers. In these cases, governments should establish a predictable and simple legal environment based on a decentralized, contractual model of law rather than one based on top-down regulation. Where Moroccan governmental intervention is necessary to facilitate electronic commerce, its goal should be to ensure competition, protect intellectual property and privacy, prevent fraud, foster transparency, support commercial transactions, and facilitate dispute resolution.

As early as July 1996, King Hassan II recognized the unique qualities of the Internet. As discussed above, Morocco has taken steps to review existing laws and regulations and revise or eliminate those laws that may hinder Morocco's full participation in e-commerce. SEPTI anticipates that it will be able to provide the government with draft regulations on e-commerce within the next eight months.

As discussed above, Morocco's banking laws need to be reviewed and revised in order to allow for paperless electronic payment systems. If corporations and individuals cannot be paid for an item purchased electronically without providing the signed invoice as validation of the transaction, corporations and individuals will not make full use of e-commerce.

As the Internet is unique, just as Morocco has created new commercial courts and provided training to its judges in the area of commercial law, Morocco will need to provide its judiciary with training to understand e-commerce and the high technology industry.

One last point for Morocco to consider vis-à-vis high technology corporations and Morocco's desire to appeal to such corporations to invest in Morocco is the unique employment characteristics of such high technology corporations. Such corporations would be better served if they were able to adapt quickly to changes in the business climate. Currently, Morocco's laws make it extremely difficult for a corporation to change the size of its labor force to meet short-term requirements or a sudden upsurge in work. Morocco's labor laws present numerous hurdles that make it extremely difficult to terminate an individual's employment. As such, any corporation will hesitate before hiring new employees to meet what may only be a temporary change in the business climate. As a result of this, business opportunities will be lost both for the corporation and for the individuals who could have been employed.

5. Facilitation of Global Commerce

The Internet is emerging as a global marketplace. Moroccan law should facilitate not only the development of the nation's domestic electronic commerce, but also the growth of global commerce. The legal framework supporting commercial transactions on the Internet should be

governed by consistent principles across state, national, and international borders that lead to predictable results regardless of the jurisdiction in which a particular buyer or seller resides.

Morocco is currently reviewing and proposing reforms relative to e-commerce. Morocco is looking to the laws of other countries and international organizations as models for the laws it may enact such that e-commerce will be able to facilitate not only the development of Morocco's domestic electronic commerce, but also the growth of global commerce. However, other aspects of Moroccan law that are discussed elsewhere in this assessment, such as the convertibility of the Dirham, present a substantial barrier to Morocco's full participation in global commerce.

Part IV—E-Commerce and Business Development

Introduction

In supporting the development of the Internet and electronic commerce in Morocco through policy reform and pilot projects, the GOM will concurrently encourage the creation and development of private enterprise. Private sector growth, especially that of SMEs, will in turn fuel the growth of the Moroccan economy.

Electronic commerce and information technology more generally can help the GOM diversify the economy away from agriculture and toward value-added services and industrial production. As electronic commerce begins to flourish in Morocco, a whole host of new businesses centered in the IT sector will start to emerge. These businesses are being created in Morocco even today. Last year, there were 83 private Internet service providers (ISPs) in Morocco, now there are more than 230. Each one of these ISPs is responsible for much-needed job creation and revenue generation.

There are other kinds of businesses being created that are specifically designed around electronic commerce, including Web design and Internet/electronic commerce consulting. Indeed, Arthur Andersen in Casablanca recently added four new consultants to assist Moroccan businesses with how to reconfigure back-office operations as well as sales and marketing to make the best use of the Internet. There are also new retail service operations like cyber cafes, prevalent today in Rabat and Casablanca, that depend directly on the Internet. Supporting the creation of these new businesses is important because IT-sector companies tend to pay their employees higher-than-average salaries. Moreover, the IT sector, once developed, contributes more to economic growth than other more mature industries like commodities.

The Internet and electronic commerce also help existing businesses increase efficiency and profits, thereby generating economic growth. Key entry points to the Internet, e-mail and Web "surfing," serve as important sources of information exchange and idea generation for the private sector. All of the Moroccan businesses spoken to over the two-week period had e-mail accounts and were connected to the Internet, although some businesses integrated these services into their day-to-day operations more fully than others. For instance, only about half of the companies printed e-mail accounts on their business cards, suggesting that the telephone and facsimile are still the primary modes of communication for many Moroccan businesses.

Also, the vast majority of those businesses with Web sites used their sites exclusively for "brochureware," or marketing purposes. Generating two-way communication through the use of e-mail or live Internet links on the company's Web site, engaging in electronic transactions over the Internet, or linking the site to back-office operations is still relatively rare in Morocco. It is in the integration of these types of activities that will generate the most productivity gains for Morocco's private sector. Fully integrated use of the Internet, however, depends on cheaper telecommunications costs and a facilitative financial system, as discussed above. In fact, the high cost of connecting to the Internet and

impediments present in Morocco's financial system were the problems most-often cited in interviews with Moroccan companies.
As in the U.S., initially business-to-business electronic commerce will be more important for the development of the Moroccan economy than electronic commerce that flows from business to consumer. While most people think of buying books from Amazon.com or airplane tickets from Microsoft's Expedia as examples of electronic commerce, over 80 percent of electronic commerce in the U.S. flows between businesses. Similar patterns are emerging in other industrialized countries.

There are several ways in which business-to-business electronic commerce can spur private sector growth and economic development in Morocco. Most generally, electronic commerce over the Internet increases efficiency across the value-added chain, from input sourcing, to production, to packaging, to marketing/sales, to distribution, creating higher quality products and services at lower prices. The more intricate the value-added chain, the more benefits the sector will experience in integrating electronic commerce into its day-to-day operations. These benefits can be seen in commodity sectors, like www.esteel.com, where buyers and sellers of steel can trade privately and securely over the Internet, and service sectors, like www.eloan.com, where individuals and business can receive approval on mortgage applications in less than 24 hours.

A key inhibitor of greater use of technology by private sector entities is labor law. For firms to get the full benefit of technology, they need to restructure labor within the organization. Labor laws are a very important impediment to doing this. That is, the decision to upgrade information technology is usually associated with the potential efficiency gains and cost reductions. Some of those benefits come from reducing labor inputs in some areas of ongoing operations. If labor cannot be restructured, the firm is left with no efficiency gains and only additional costs. This issue points out the crosscutting nature of the policy issues facing the GOM where the common thread is technology.

A. Development of Trade Associations

Trade associations in Morocco are a key locus for information exchange, technology uptake, and diffusion. These associations can serve as a conduit for awareness education for Moroccan companies in both business-to-business and business-to-consumer electronic commerce applications. For example, a trade association can get the word out to people about the possibilities of electronic commerce. Similar public relations and information campaigns have had good success in the U.S., Europe, and emerging economies like Brazil.

Educational approaches used by trade associations like the American Chambers of Commerce include product seminars and demonstration kiosks. Seminars sponsored through trade associations (possibly at annual conventions or trade shows) would allow companies already active in electronic commerce the opportunity to demonstrate and explain electronic commerce products and services to the Moroccan business community. Such interaction is vital to developing a widespread mindset for new ideas like electronic commerce. In addition, kiosks sponsored through trade associations can be set up for access and information in public areas. The kiosk contains a monitor and mouse and is connected to a local server, with access to limited Web sites. Rather than being full and free Internet access devices, kiosks

are rather places where people can gain a preliminary insight into the power of the Internet generally, and electronic commerce more specifically.

Trade associations can also serve as important conduits for electronic commerce success stories. Often, what businesses need most in approaching electronic commerce is to see how a business similar to their own has succeeded with the use of this (relatively) new technology. In addition, linkages across borders to international groups can further the outward orientation and rapid uptake of the more advance uses for electronic commerce.

B. SMEs and Micro-enterprise Development

Micro-enterprises employ the majority of Morocco's poorer citizens. USAID/Rabat and Volunteers in Technical Assistance (http://www.vita.org) are working with Al Amana of Morocco to lend start-up and expansion monies to Morocco's micro-enterprises. As of June 1999, $5.16 million was loaned to Moroccan companies, with a 99 percent repayment rate. Fifty-three percent of VITA's clients in Morocco are women. VITA relies on the Internet to help gather information on its clients; the organization also conducts many of its conferences over the Internet. Al Amana is moving quickly to integrate the Internet into its back-office operations. The greater efficiency of the Internet will improve its cost structure so that even more funds are available for lending.

SMEs are a fertile ground for electronic commerce. In the US, 40 percent of SMEs use the Internet, up from 20 percent in 1996. SMEs usually focus on a core business, which might or might not be related to information technology. Back-office operations, from accounting to order fulfillment, often receive little attention from top management, which can lead to resource misallocation, cost overruns and the demise of the firm. Electronic commerce makes it easier and cheaper to outsource these activities so that the SME can focus on their core competencies. Growth of electronic commerce business in order fulfillment is staggering; about 25 percent of firms in the US outsource order fulfillment. This outsourcing has the added benefit of creating new markets for new firms.

Electronic commerce may enable a new form of finance for SMEs and micro-enterprises. Offering financial services to these groups is costly and risky. Yet they cannot bear the relatively higher interest rates that go along with cost and risk. Consequently, these firms often are ignored and left out of financial intermediation. Electronic commerce may reduce the cost of obtaining information, particularly if the enterprises can use a local IT center to input pertinent information. In addition, electronic commerce certainly will reduce the cost of administration and communication with borrowers, through use of interactive spreadsheets and e-mail. Through securitization of assets, electronic commerce might open the door to a new source of finance that has not been available for individual borrowers, but which is available for shares in an assets that is backed by a package of loans to small borrowers. While this is still a high-risk asset, between new sources of funds and lower costs, the financing rate might be accessible for small borrowers.

C. Sector-specific Business Development

There are several sectors important to Moroccan industrial development where electronic commerce is becoming more prevalent in global relationships. Morocco's overall development could be stifled if these sectors lag in the uptake of the Internet and electronic commerce.

1. Textiles and Apparel

Textiles and apparel are a key component of Morocco's industrial production (14.5% of total industrial production, comparable to mining or energy). Currently the sector is at the forefront of the country's export-led industrial growth. For example, from the early 1980s to the early 1990s net exports of textiles and clothing expanded almost fivefold, from $120 million to $570 million.

There are several U.S.-based multinational apparel companies operating in Morocco: Fruit of the Loom, Jordache, and Sara Lee Haynes. Electronic commerce can help these MNCs to overcome two of the industry's greatest growth challenges: a large number of steps/variables along the value-added chain and a fluctuating/seasonal demand cycle. By bringing up Moroccan textile mills, cutters and sewers, and wholesale buyers, as well as internationally-based retail suppliers, onto the Internet, significant improvements can be made to communication and just-in-time inventory and distribution systems.

Electronic commerce can also allow Moroccan textile mills to communicate directly with internationally based buyers of wholesale fabrics. For example, Phoenix Textiles (http://www.fabric.com), a U.S.-based buyer and distributor of textiles, uses the Internet to purchase its fabrics from mills around the world. Then, through its Web site, Phoenix Textiles sells to individuals and small and medium-sized enterprises as well as large corporations. The company relies on the Internet to replenish its inventory as needed.

Supplying international buyers of wholesale textiles will become increasingly important for Moroccan textile mills as World Trade Organization (WTO)-member countries phase out the quotas in the Multi-Fiber Arrangement by the year 2005.

Recognizing the importance of electronic commerce in the textile sector, many countries have started implementing electronic commerce pilot projects specifically targeted toward the textile industry. The European Union, for example, is launching Texconnect, an EDI/Web EDI (Electronic Data Interchange) interface to allow smooth communication for all companies in the textile supply chain.

A potential problem lies in that some Moroccan firms, in textiles and other sectors as well, are turning to EDI as the form of electronic interconnection. EDI is about five times more expensive than connectivity through the Internet, and is a much less flexible electronic transmission mechanism. EDI cannot be interactive, cannot be multimedia, and most importantly, does not support a competitive environment between buyer and seller.

2. Services-based Trade: Tourism

Tourism is a significant foreign-exchange earner in Morocco ($1.2 billion in 1997), as well as an important source of employment. Tourism accounted for nearly 10 percent of GDP last year. The GOM's plan to double tourist numbers and raise gross receipts to $6 billion by the end of the year, while ambitious, can be assisted by the use of electronic commerce and the Internet more generally. Indeed, if Morocco lags in the uptake of electronic commerce, it will lose its international standing as a tourist destination.

At a minimum, the Internet can serve as an important vehicle for the distribution of brochure-ware (information, photographs, video clips, etc.) to potential tourists planning a vacation in Morocco. The Internet can also offer potential tourists the convenience of researching and booking their entire vacation online, from airplane tickets, to hotel accommodation, to auto rental, etc. Currently, few of the tourist activities in Morocco use the Internet to reach international audiences. Moreover, none have the capacity to take reservations, pre-payment of other common and increasingly valued services. Because of this, Moroccan businesses cannot reach the traveler directly, and thus are required to pay a reservations agent a portion of the profits to be earned on the client. The process of putting tourist operations online itself creates new businesses, so the Internet becomes part of a virtuous circle of development.

3. Computers and Software

Morocco is emerging as an African hub for software production. In early 1998, for example, Microsoft set up its regional headquarters in Casablanca. Compaq and Oracle have also decided to set up regional bases in Morocco. By locating their production in Morocco, software MNCs can benefit from the relatively inexpensive labor costs, an investment-friendly environment, and Morocco's trade association with the EU. The Internet can help these companies communicate with headquarters. It can also serve as an important distribution channel for software, allowing the companies to bypass Africa's physical infrastructure challenges.

4. Resource-based Trade: Phosphates

Morocco holds approximately three-quarters of the world's phosphate reserves; it is also the largest exporter of phosphate rock. Morocco can use the Internet to secure outside funding to expand exploration and extraction activities, or to develop relationships with downstream processors in Europe and Asia.

The state-owned Office Chérifien des Phosphates (OCP), for example, is marketing partnership opportunities through its Web site at http://www.ocpgroup.com. The site displays pictures and data of the OCP Group's mines in Oulad Abdoun, Gantour, and Ouad Eddahab, and gives contact information for OCP Group headquarters in Casablanca.

Recently there have been movements toward moving commodity trade to electronic media. For example, on the previously-cited Web site http://www.esteel.com, producers and buyers of steel can

post offers and bids over the Internet confidentially and securely. Similar trade with phosphates over the Internet might be a possibility in the short-term future.

5. High-value Agriculture-based Trade: Fruits and Vegetables

The agricultural sector–including cereals, export crops like citrus fruit and tomatoes, forestry, fishing, and livestock–employs approximately 40 percent of the Moroccan labor force and accounts for approximately 15 percent of GDP. As a result, climate changes can have a significant impact on the Moroccan economy. For example, this year a poor harvest is causing the GOM to miss its budget targets.

The Internet can help both farmers and the government better plan for these climate changes. In the United States, for example, a Weekly Weather and Crop Bulletin–sponsored by the U.S. Department of Commerce, the U.S. Department of Agriculture, and the National Oceanic and Atmospheric Administration–is posted over the Internet (see http://www.usda.gov) to give farmers detailed information on many issues, including temperature changes and crop moisture.

There are also privately sponsored electronic commerce initiatives underway in the agriculture sector. The Global Agribusiness Information Network (http://www.fintrac.com/gain), sponsored by three agribusiness market research/consulting firms, offers free wholesale market reports for fresh fruits and vegetables in the Americas, Europe, and Asia, and historical price tables. The Web site also has a free buy-sell bulletin board, where producers and buyers of wholesale agricultural products from all over the world post offers and bids.

Presidential Initiative on Internet for Economic Development: Assessment for USAID/Morocco

VOLUME TWO: APPENDICES

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Acronyms and Abbreviations

AmCham	American Chamber of Commerce
ANRT	Agence Nationale de Règlementation du Secteur des Télécommunications
ATM	Automatic Teller Machine
BSA	Business Software Alliance
BCP	Banque Centrale Populaire
CIH	Credit Immobilier et Hotelier
CSE	Casablanca Stock Exchange
DOC	U.S. Department of Commerce
EDI	Electronic Data Interchange
EU	European Union
FCC	Federal Communications Commission
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GII	Global Information Infrastructure
GNP	Gross National Product
GOM	Government of Morocco
GPBM	Groupement Professionnel des Banques du Maroc
IAM	Itissalat al-Maghrib
ICTs	Information and Communications Technologies
IED	Internet for Economic Development Initiative
IFC	International Finance Corp
IMF	International Monetary Fund
IRs	Intermediate Results
IPOs	Initial Public Offerings
ISP	Internet Service Provider
IT	Information Technology
LANs	Local Area Networks
MAGHREB	Algeria, Libya, Mauritania, Morocco, and Tunisia
MCT	Multi-purpose Community Telecentre
MNCs	Multinational Corporations
NGOs	Non-governmental Organizations
NII	National Information Infrastructure
NTIA	National Telecommunications and Information Administration
OECD	Organization for Economic Cooperation and Development
OCP	Office Chérifien des Phosphates
OEM	Original Equipment Manufacturer
PC(s)	Personal Computers
PSTN	Public Switched Telephone Network
PTO	Public Telephone Operator
PTT	Postal Telegraph and Telephone
RTII	Regional Trade and Investment Initiative
PVOs	Private Voluntary Organizations
SEPTI	Secretary of Post Office and Information Technology

SME(s)	Small and Medium-sized Enterprises
TPI-SAL	Telecommunications, Post and Information Technology Adjustment Loan
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme
UNITU	United Nations International Telecommunications Union
USAID	United States Agency for International Development
VAT	Value-added Tax
VSAT	Very Small Aperture Terminal
WB	World Bank
WIPO	World Intellectual Property Organization
WLL	Wireless Local Loop
WTO	World Trade Organization

Appendix A – Morocco's Letter of Sector Development Policy

The following materials have been extracted out of a Letter of Sector Development Policy within which the Kingdom of Morocco articulates its Reform Program.[1] These extracts serve to inform the reader of key strategies, objectives, and progress already achieved and the in-country setting upon which the IED Assessment took place:

> *Given the new challenges created by the liberalization process set in motion by the adoption of Law 24-96, the Government plans to devise a clear strategy and a consistent action plan to energize the telecommunications, post, and information technology sectors.*
>
> *The Government believes that these sectors play a key role in the country's economic and social development, and that they should continue to be a major focus of attention in order to secure Morocco's place in the information society through the use of efficient communications and information access services.*
>
> *This letter identifies the Government's major objectives and the steps that have already been taken in this field, and describes the strategy it will follow to achieve these objectives…*
>
> *I. Government Objectives*
> *The Government believes that the telecommunications, post, and information technology sectors are key elements of the Moroccan economy and that sound policies must be adopted in order to achieve two major objectives, namely, to accelerate economic growth and reduce social disparities. The Government wishes to secure Morocco's place in the information society, increase the competitiveness of the postal service, and promote the development of a competitive and dynamic telecommunications sector to enable the country to meet the challenges of the twenty-first century. To this end, the Government plans to do the following:*

- *Provide Moroccan enterprises with access to the telecommunications, postal, and information services they require in order to become competitive…*
- *Provide poor and remote households with access to modern means of communication and information…*

[1] Letter of Sector Development Policy, Kingdom of Morocco. Reform Program in the Telecommunications, Post, and Information Technology Sectors (unofficial translation of French version). Dated February 24, 1999.

- *Foster the modernization and efficiency of the administration and of public institutions providing social services such as health and education, through better access to and more efficient use of information technology.*
- *Ensure the financial autonomy of the postal service.*
- *Generate revenues for the Treasury in the fields of telecommunications and information technology…*
- *Promote the emergency of new economic activities in Morocco based on the development and use of information technologies.*

II. *Measures Already Adopted*

A number of measures have already been adopted in order to achieve the aforementioned objectives. For example—pursuant to the 1988-92 orientation plan, which made the telecommunications sector a priority, and the 1993-97 performance contract between the Government and the National Post and Telecommunications Office (Office National des Postes et Telecommunications, ONPT) – considerable progress has been made in expanding and modernizing the telecommunications network, developing services in rural areas, and providing a broad range of new services, including data transmission and cellular phone services.

For example, switching capacity rose from 293,000 lines at the end of 1987 to 1,683,000 lines in 1997, while the number of lines in service rose from 266,000 to 1,375,000 during the same period. In addition, network transmission capacity increased from nearly 4,000 circuits to 466,000, mainly through the use of fiber-optic technology (more than 4,000 km of high-capacity fiber-optic cable was installed in recent years). During the same period, average connection time fell from 80 months to 1.4 months, including rural areas.

The use of more advanced fiber-optic technology (synchronous digital hierarchy, SDH) and the digitalization of virtually all of Morocco's transmission and switching systems vastly improved the networks reliability and made it possible to expand the range of services offered, including videotex, ISDN (Integrated Services Digital Network), the Internet, and high-capacity connections.

Rural telecommunications services also were improved, the number of rural communes with automated networks having risen from 65 to 1,058,or 82 percent of the 1,297 rural communes in the country. The number of secondary rural communities with automated systems rose from 69 to 1,498, or 5 percent of 31,888 such communities.

In addition, expansion of the public telecommunication s network increased the number of public phones from 484 in 1987 to 27,000 at the end of 1997; 83 percent of these were managed by private operators (5,600 at the end of 1997).

Initiatives are also underway to improve the management of postal services. A program to computerize postal offices has been launched. By the end of 1998, 240 offices, accounting for 85 percent of the revenues of Barid Al-Maghrib (BAM) will have been computerized.

Pilot email access sites have been set up on university campuses, and the experiment will be extended in the near future.

New information technology resources have been introduced for funds transfers, including electronic money orders and use of EUROGIRO network for overseas transfers

Management of postal checking accounts and the Caisse d'Epargne Nationale has been computerized, thus offering users continually improving services.

The most far-reaching reform measure, however, have been adopted in the post and telecommunications sectors with respect to the legal institutional framework. These measures include in particular:

- *The presentation by Morocco of an offer on telecommunications within the framework of the World Trade Organization (WTO, February 1997);*
- *The promulgation of Law 24-96 in August 1997. This law enables the introduction of competition in all segments of the telecommunications market and privatization of the main operator. The law separated post from telecommunications by establishing a public entity for post (BAM) and a joint stock company—currently state owned—for telecommunications, Itassalat Al-Maghrib (IAM). The law also created the national telecommunications regulatory agency (Agence Nationale de Reglementation du Secteur des Telecommunications, ANRT), an autonomous institution;*
- *The promulgation of 15 decrees and arretes implementing Law 24-96 and covering, inter alia, the principles governing interconnection agreements for telecommunications networks, provisions governing IAM's cahier des charges, and the list of value-added telecommunications services that can be provided simply upon declaration to the regulator (the liberalization of these services is now complete, and the regulator receives an average of five declarations daily from operators wishing to provide such services); and*
- *Licensing of four express international courier service operators.*

III. The Planned Strategy

The program the Government plans to implement focuses on simultaneously on telecommunications, post, and information technology

III-1 Telecommunications

The Government is convinced that achievement of its objectives in the telecommunications sector hinges on introduction of effective competition…

The Government intends to grant a series of licenses to increase the number of operators providing various types of service. The Government first intends to focus on the Global System for Mobile Communications (GSM). Very Small Aperture Terminal (VSAT) communications, and the Global Mobile Personal Communications System (GMPCS, and alternative infrastructures.

With respect to GSM, the Government plans, by June 1999, to grant a license enabling an operator in addition to IAM to provide GSM services. The license will be awarded following a competitive bidding process, as envisaged by Law 24-96. The relevant cahier des charges will enable the operator to: (i) establish its own transmission infrastructure linking its network components, (ii) provide direct international access to its subscribers by January 1, 2002 at the latest, and (iii) provide fixed cellular services, at least in rural areas.

With respect to VSAT, the objective is to grant licenses enabling operators to provide value-added services. As to GMPCS, such services are expected to have a major impact on the sector, and the government intends to introduce licenses tailored to this type of system in 1999.

With respect to alternative telecommunications infrastructures, the Government plans to allow owners of such infrastructures to make them available to providers of telecommunications services and operators of independent networks. As study will be completed in June 1999 with the objective of identifying and developing the required procedures and instruments.

In the near future—although the process may extend beyond the period covered by the reform program identified in the Bank's Telecommunications, Post, and Information Technology Sector Adjustment Loan—the Government intends to strengthen competition and increase the number of telecommunications operators, particularly by expanding the list of services which can be provided simply upon

declaration to the authorities. The Government will also consider the desirability of granting additional GSM licenses in the future. Liberalization of fixed services also will be pursued, in keeping with Morocco's commitments within the framework of the WTO. With this end in view, the Government has undertaken a study of the instruments it will use and the schedule for the liberalization of services. The result of the study will be known by late March 1999.

Strengthening the regulatory framework is the Government's second priority in the telecommunications sector. Above all, it is essential to ensure that ANRT is in a position to assist in implementing the liberalization strategy outlined above.

The Government intends to provide ANRT with the resources and autonomy it requires in terms of both financing and personnel. In regards to financing, the Government wishes to ensure that ANRT has sufficient revenues to meet its needs….. Moreover, to guarantee it autonomy ANRT will ultimately have to rely on its own resources for most of its needs and should not have to count on transfers from the State budget. Accordingly, the Government will incorporate in the 1999-2000 Finance Law provisions allocating a specific percentage of licensing revenues that reflects the Agency's real needs, as envisaged in Article 38 of Law 24-96.

With respect to the Agency's personnel, the Government plans to adopt new staff rules reflecting the unique nature of ANRT and the skills required by an entity responsible for regulating the telecommunications sector. The staff rules will also included professional ethics provisions reflecting the special responsibilities of ANRT. In coming months, ANRT will focus on formulating and implementing a policy on appropriate training for its regulatory personnel. The Government ultimately plans to separate ANRT from the National Post and Telecommunications Institute (Institute National des Postes et Telecommunications, INPT). The latter institution, which is currently part of ANRT, has no regulatory responsibilities and is a drain on ANRT's budget.

One of ANRT's major tasks is to ensure that service providers follow sound, lawful practices. In particular, interconnection tariffs should reflect the service providers' actual costs as well as the costs of other operators providing interconnection services. ANRT is also authorized by law to audit operator's accounts for verification purposes.

It is also essential for ANRT to follow fair and transparent rules in dealing with operators and customers. The Agency will gradually elaborate a set of procedures ensuring, inter alia, that interested parties are consulted, regulatory decisions and the explanations for them are published, and decisions can be appealed. Priority will be given to defining procedures that will be useful in the immediate future, such as those to be followed when resolving interconnection disputes.

The Government's third priority in the telecommunications sector concerns the privatization of IAM. It considers this privatization necessary so that the main operator can secure the capital, know-how, and autonomy it needs to perform optimally in an increasingly more open and competitive environment. Privatization of IAM will also facilitate efforts to develop competition among all operators. By March 1999, the Government intends to define and then start to implement a privatization strategy for IAM that is compatible with these objectives and tailored to Morocco's circumstances. A number of experts have already been recruited to assist the Government in achieving these goals.

The Government's fourth and final priority in this sector is to ensure that telecommunications services are provided on an ongoing, regular basis throughout Morocco and that all people are given equal access and treatment at affordable prices. The measures adopted will also make it possible to reduce regional disparities and promote the development of areas on the outskirts of cities, the provision of services to and the opening up of rural areas, and the extension of the public telephone network. The Government attaches considerable importance to this effort, which presents a number of challenges. A clear definition of the objectives being pursued in this regard will make it possible to determine exactly the scope of the public service obligations that need to be met. The next task will be to determine the real costs of meeting those obligations and ensure that the resources available to cover those costs are used as efficiently as possible. Finally, it is important to identify ways to finance these obligations that do not place a disproportionate burden on any one operator and that are not based on cross-subsidies by a particular provider.

The Government plans to take advantage of the relevant opportunities specifically created by Law 24-96, particularly the requirement that all operators of the public telecommunications networks contribute to the cost of public service obligations, and the reliance on market

mechanisms to meet those obligations. The Government plans initially to implement a pilot program in the northern provinces for this purpose.

III-2 Post

…

III-3 Information Technology

The Government in convinced that Morocco must secure a place in the information society if the country is to achieve the objectives outlined above, which include enabling all segments of society to enjoy access to information, enhancing the competitiveness of enterprises, and developing new economic activities in the crucial information technology sector.

The Government also intends to promote online access by the public to a variety of services, including education and health. It will actively encourage telecommuting and promote its use to leverage service exports, given Morocco's proximity to Europe and the country's pool of skilled, competitively remunerated manpower.

The Government will rapidly implement the national information technology strategy now in preparation. The strategy will focus primarily on:

- *Establishing high-capacity networks to support services with high added value and link, inter alia, administrative centers, hospitals, universities, and business centers;*
- *Establishing a legal framework for the use of information technologies;*
- *Promoting electronic commerce;*
- *Modernizing the administration (the Government on Line initiative);*
- *Developing information technology activities; and*
- *Promoting the use of information technologies within firms.*

The Letter of Sector Development Policy was signed by S.E. Larbi Ajjoul, Secretary of State in Charge of Posts and Information Technology.

Appendix B - Other IT Initiatives

A. Model Computer Commercial Law (MCCL) Project

The overall purpose of the MCCL Project is to support economic development programs by fostering legal and regulatory reforms in developing nations that in turn will help regulate, enhance and standardize electronic commerce. The focus of the project is to develop a package of model laws that covers the range of human activity affecting electronic commerce in two developing countries.

Electronic commerce and computer laws in the United States and other developed nations are not uniform. They have been enacted in a climate of rapid technological change and in response to a complex array of new manifestations of old problems (e.g., violations of intellectual property norms) and completely new issues brought about by the changing technological environment itself (e.g., computer hacking). The MCCL Project has two main goals: 1) is to develop and implement model laws, regulations, policies, and guidelines that will reduce the barriers to increased use of electronic commerce in developing countries; and 2) to promote other initiatives using electronic commerce to stimulate and accelerate economic growth in the developing world.[2]

B. United Nations - International Telecommunications Union (ITU)

The ITU-D (Development Bureau) has underway in several countries, a special initiative for assisting developing countries in the area of Electronic Commerce. This project, Electronic Commerce for Developing Countries (EC-DC) has the following objectives:[3]

The objectives of EC-DC are to:

- Enable developing and least developed countries to use existing infrastructures and services to participate in electronic commerce.
- Facilitate the transfer of electronic commerce technology and increase public awareness.
- Stimulate the planning and deployment of the telecommunication infrastructure.

Besides the obvious economic benefits, EC-DC projects could stimulate the demand for Internet connection infrastructure that will facilitate access to health, trade and educational information on the Internet. In this respect, it will support and complement other UN development programs in the areas of health, trade, commerce and information technology.

Part of the complexity in implementing an electronic commerce system lies in:

[2] http://www.mcclproject.org/

[3] http://www.itu.int/ECDC/

1. Building a secure electronic payment infrastructure that provides trust, confidentiality, non-repudiation, integrity and authentication of all transactions between businesses, consumers and financial institutions.

2. Developing secure commerce applications and integrating them with existing ICT infrastructure for reliable and automated communication with banking systems and business partners.

The ITU is currently coordinating EC-DC projects in Morocco and Venezuela. Several countries (including Brazil, Cameroon, Chile, Ecuador, Egypt and India) have shown interest in participating. Pilot projects in areas like Tele-medicine, electronic commerce and distance learning demonstrate the use of telecommunication infrastructure. The theory is: if developing and least developed countries wait until a complete infrastructure for electronic commerce is in place, the gap with the developed world in this new business field will grow much wider.

C. European Union-Euro-Med Partnership Program

USAID's recent Regional Trade and Investment Initiative acknowledges and takes into account a number of related initiatives taking place within the Maghreb countries. With respect to those being undertaken by the European Union, it states the following: [4]

> *The European Union is undertaking an extensive program to improve ties with the Maghreb countries in the context of its Euro-Med Partnership Program. Since the launching of the "Barcelona Process" in 1995, the EU has signed Association Agreements with Tunisia and Morocco and is negotiating an agreement with Algeria. The Association Agreements are similar to the US Government's Trade and Investment Framework Agreements in that they set out the process for trade negotiations over the next few years. But the Association Agreements go considerably further in that political, security, and cultural issues are on the agenda.*
>
> *The Association Agreements are also more objective-oriented, as they are to lead to establishment of the Euro-Mediterranean Free Trade Area before 2010. The Barcelona Work Program is worth quoting at length to understand the scope of the planned integration.*
> *[all quotes should be shown the same way—see footnote #2 above]*
> *"Cooperation will focus on practical measures to facilitate the establishment of free trade as well as its consequences, including:*
>
> - *Harmonizing rules and procedures in the customers field, with a view in particular to the progressive introduction of cumulating of origin; in the*

[4] Regional Trade and Investment Initiative – Results Package. January 1999; revised July 8, 1999. USAID/ANE Bureau. Pg. 15-16.

meantime, favorable consideration will be given, where appropriate, to finding ad hoc solutions in particular cases;

- *Harmonization of standards, including meetings arranged by the European Standards Organizations;*
- *Elimination of unwarranted technical barriers for trade in agricultural products and adoption of relevant measures related to plant-health and veterinary rules as well as other legislation on foodstuffs;*
- *Cooperation among statistics organizations with a view of providing reliable data on harmonized basis; and*
- *Possibilities for regional and subregional cooperation (without prejudice to initiatives taken into other existing for a)"*

This ambitious program for trade integration is backed up with an extensive aid program to "upgrade [the EU's] Mediterranean partners economically," covering eight specific goals:

- *Creating a favorable [regulatory and fiscal] environment*
- *Facilitating trade*
- *Promoting investment*
- *Encouraging privatization*
- *Improving infrastructures*
- *Supporting small and medium companies*
- *Developing human resources*
- *Improving companies' competitiveness*

In this context, it must be understood that the USAID Regional Trade and Investment Initiative will work to complement, not replace, these large ambitious programs of other donors.

Appendix C – The IED Assessment Team

The assessment team had the distinct benefit of its members having expertise in both the hard infrastructure of the Internet (e.g., technology), as well as the soft infrastructure (e.g., public policy, laws, etc.). This combination of expertise provided a more comprehensive assessment relative to assessing the current in-country situation, by identifying broad areas for pursuit, and by identifying potential issues and remedies required to better leverage the Internet for Economic Development in Morocco.

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Richard Howard is a Manager in the Global Bureau of USAID, and is an expert in the area of legal and institutional reform. In his work at USAID, Mr. Howard has managed the Model Computer Commerce Law Project for the agency. In 1998, he organized the Legal and Institutional Reform (LIR) Rule of Law Conference that took place outside Washington, D.C. During this conference, he also moderated the plenary session, which was entitled: "Technology: It Won't Work Without LIR." Mr. Howard's prior experience includes working in the Chicago Regional Tax Office for Price Waterhouse & Co.; l and served on the California Joint Legislative Committee Staff and in the U.S. military as a U.S. Navy Officer on the USS New Orleans. Mr. Howard is a lawyer by training, having received his JD from the University of Iowa in 1976; he received his BA in accounting from the same institution in 1969. Mr. Howard is a member of the California and Iowa Bars.

Brad Johnson, Team Leader, Senior Associate, ARD, Inc. (bjohnson@arddc.com)
Bradford P. Johnson is an experienced attorney with expertise in handling international projects in law and economic and political development, emphasizing the use of new communication technology. A member of the Washington, D.C. bar since 1985, Mr. Johnson practices law and has designed and implemented conflict resolution, legal and institutional development projects through the U.N., USAID, the OAU, and the OAS, the Institute of World Affairs and ARD, Inc. Mr. Johnson is president of Global Communication Solutions, a communications technology company which provides networking services and rule of law support for international and national discussion groups. At present, he is team leader on the USAID-funded Model Computer Commerce Law Project. This project aims to provide the technical services required to stimulate electronic commerce activities in developing countries through business, legal and regulatory reform. Mr. Johnson is fluent in Russian, conversant in Spanish, and has a reading knowledge of German. Mr. Johnson is a member of the Bar of the District of Columbia.

Catherine Mann, Senior Fellow, Institute for International Economics (clmann@iie.com)
Dr. Catherine L. Mann is a *Senior Fellow* at the Institute for International Economics. She has just completed writing Is the US Trade Deficit Sustainable? which answers some perennial questions about the impact of global integration on the US economy that are now more urgent given the recent global financial crises and the dramatic widening of the trade deficit. Her next book examines the economic and policy implications of electronic commerce over the internet. It is a primer for foreign policy-makers and also is helpful for businesses considering investment opportunities. It offers common ground

to policy-makers in industrial and developing economies to spur forward movement in the upcoming WTO Summit. Previous to the Institute, Dr. Mann held several posts at the Federal Reserve Board of Governors, including Assistant Director of the International Finance Division, was on the staff of the President's Council of Economic Advisors, and worked for the Chief Economist of the World Bank. Dr. Mann received her PhD in Economics from the Massachusetts Institute of Technology and her undergraduate degree is from Harvard University. She has written numerous articles on international trade and finance, publishing in the American Economic Review, Journal of International Money and Finance, Brookings Papers on Economic Activity, and International Economy, among other journals and volumes. She wrote and edited with co-authors, *Evaluating Policy Regimes: New Research in Empirical Macroeconomics.*

Darrell Owen, Adviser (darrell_owen@msn.com)
Darrell Owen is currently an international consultant specializing in Information Communications Technologies (ICTs) in developing countries. Prior to forming his own company he worked at the US Agency for International Development (USAID) where most recently he served as the Deputy Y2K Program Manager. His other management responsibilities included the Agency's Information Technologies Transfer (ITT) activity, the Agency's Internet and Intranet activities, and overseeing a Mission Connectivity initiative for improving telecommunications capabilities between the Agency's field locations. Darrell's focus bridges the actual delivery of technology and telecommunications with the application of the capabilities in developing settings.

Karl Stanzick, Managing Director, MTDS S.A. (karl@mtds.com)
Karl Stanzick is an Internet Business and Policy Specialist who has worked with information and communication technologies in the developing world since 1989. Designing and implementing the telecommunications infrastructure required to support Internet access for e-commerce and developmental activities in the most remote areas and under the most economically unfavorable conditions has been one of his primary activities. As the Technical Director for MTDS, Karl pioneered Internet connectivity in Morocco by establishing the first private Internet Service Provider in the country. In addition to servicing the Moroccan public and private sectors with Internet access and value-added services, MTDS is the primary technical contractor for the USAID Leland Initiative and has installed and currently maintains the primary Internet gateways for six sub-saharran African countries using the latest appropriate technologies. Before joining MTDS, Karl set-up and maintained the security and communication systems for USAID/Benin. After his schooling at the University of California Santa Barbara, Karl joined the US Peace Corps and did his tour in Benin, West Africa. Karl speaks, reads, and writes fluent French.

Holly Roth, Attorney, Manatt, Phelps & Phillips, Washington, D.C. (hroth@manatt.com)
Ms. Roth graduated *cum laude* from The Washington College of Law, American University, in 1995. Ms. Roth's background includes seventeen years of commercial and government contracting experience. Prior to her legal career, Ms. Roth was employed by the Unisys Corporation as a contracts manager. Ms. Roth has had extensive experience with software and services agreements, intellectual property rights, government contracts and electronic commerce. Ms. Roth received an MBA from the University of Illinois in 1980. She received her BA in French from Scripps College,

Claremont, CA in 1978. As part of Ms. Roth's undergraduate work, she attended the Sorbonne University, Paris, France. Ms. Roth speaks and writes French and has studied Spanish. Ms. Roth is originally from Illinois. Ms. Roth is a member of the Virginia Bar and the District of Columbia Bar.

Sarah Knight, Research Associate, Institute for International Economics (sknight@iie.com)
Sarah Cleeland Knight comes to the mission with several years' experience assisting small and medium-sized companies in their international sales strategies, first for the Seattle Chamber of Commerce and then through a USDA Foreign Agricultural Service export promotion program. A recent graduate of the Masters in Science in Foreign Service Program at Georgetown University, where she concentrated her studies in international trade, Sarah joined the Institute of International Economics to work exclusively on electronic commerce policy issues. Working with Catherine Mann, Sarah is researching how government policies in areas like taxation and consumer protection can assist electronic commerce uptake in developing countries.

Appendix D – Interviews/Meetings

September 13, 1999
USAID/Morocco

September 14, 1999
USAID/Morocco/Economic Growth
USAID/Morocco/Health
USAID/Morocco/Basic Education
USAID/Morocco/Environment
US Information Service

September 15, 1999
Etablissement Autonome de Controle et de Coordination des Exportations (EACCE)
CGEM
CapInfo
AMCHAM
Groupe Open
Microsoft
U.S. and Foreign Commercial Service
Sigma Technologies

September 16, 1999
Ministry of Finance & Foreign Investment
S2M Ingenierie (Confimag)
Agence Nationale de Règlementation des Télécommunications (ANRT)
IAM
Federal Express

September 17, 1999
Secrétariat d'Etat Chargé de la Poste et des Technologie de l'Information (SEPTI)
Ministry of National Education (MNE), Computer Assisted Teacher Training Initiative, Sidi Kacem
Al Akhawayn University, Ifrane
Ministry of Information Technologies

September 20, 1999
Région Autonome Multi-Service d'Agadir (RAMSA)
Institut Agronomique et Veterinaire Hassan II, Agadir
Ministry of Health, Agadir

Wali de la Region Souss Massa Draa

September 21, 1999
Groupement Professionnel des Banques du Maroc
Casablanca Stock Exchange
Fonds d'Equipment Communal
US-Morocco Council on Trade and Investment

September 22, 1999
Office Pour le Development Industriel

September 23, 1999
Conseil Déontologique des Valeurs Mobilières (CDVM)
Ministere de l'Economie et des Finances, Direction de Impôts
Moroccan National Tourist Office
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September 24, 1999
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Bjorn WILLENNIUS

Appendix F: Bibliography

A. Web Sites

Moroccan Government
http://www.mincom.gov.ma/english/ministri/gov98/index.htm
This website provides titles and descriptions of positions within the Moroccan government as well as biographies of the individuals who currently hold those positions. It also provides links to government ministry home pages.

USAID/Morocco
http://www.info.usaid.gov/countries/ma.html
This is the USAID country site for Morocco. It includes links to the 1999 Congressional Presentation, the CIA World Factbook and to country health statistics.

Model Computer Commerce Law Project
http://www.mcclproject.org
This website describes the USAID Model Computer Commerce Law Project, which includes a blueprint for drafting model computer commerce laws in developing countries.

The GeoCities Informational Site on Morocco
http://www.geocities.com/TheTropics/4896/morocco.html
This website will give you an interesting perspective on the degree to which the web is being used in Morocco and provides general information about Morocco, including a map.

The U.S. Government (CIA) Factbook on Morocco
http://www.cia.gov/cia/publications/factbook/mo.html
This website provides basic facts and figures about Morocco.

B. Relevant Laws and Regulations

The Constitution of the Kingdom of Morocco (adopted September 13, 1996)
(http://www.mincom.gov.ma/english/generalites/state_st/constitution.htm)

Outline Law Number 18-95, Establishing Investment Charter (http://www.invest-in-morocco.gov.ma)

C. Articles and Reports

Information Technologies Follow-up Committee. **Morocco and Information Technologies: The Foundations of a Strategies**. April 1998.

ABT Associates. **Assessing the Impacts of Privatization: The Experience of Morocco**. January 1999.

Academy for Educational Development, Global Communications and Learning Systems Project (LearnLink). **Technical Proposal, Computer-Assisted Teacher Training Project (CATT) for Morocco**. 1998.

African Development Bank. **Institutional Savings Development Program in Morocco**. December 1998.

Alavi, Hamid. **Morocco: Status and Results of Activities Related to Industrial Competitiveness**, World Bank, 1998.

Battat, Joseph. **Formulation d'une Strategie de Promotion de l'Investissement au Maroc.** Foreign Investment Advisory Services, November 1998.

Benabbou, F. **Woman, Law and Development in Morocco: The Legal Obstacles Hindering Women's Contributions to Development**. Faculty of Law, Marrakech, Date unknown.

United States Agency for International Development, **USAID/Morrocco, FY 2001 Results Review and Resource Request**, April 1999, 60 pp., with annexes.

United States Agency for International Development/Global Bureau. **Legal and Institutional Reform/Rule of Law Conference. Support for Economic Growth/Institutional Reform**. September 14-17, 1998.

Walsh, James. **Middle East and North Africa Trade and Investment Initiative: Results Package**, 1999.

Center for Development Information and Evaluation, Capital Markets. **Development Projects: Kenya and Morocco Case Studies**. September 1998.

Pleasance, Charles A. **The Spirit of Independent Telephony**. Johnson City, TN: Independent Telephony Books, 1989, 304 pp.

Brooks, John. **Telephone: The First Hundred Years**. New York: Harper & Row, 1976, 369 pp.

Brock, Gerald W. **The Telecommunication Industry: The Dynamics of Market Structure**. Cambridge, MA: Harvard University Press, 1983, 336 pp.

Mueller, Milton L. Jr. (1997) **Universal Service: Competition, Interconnection, and Monopoly in the Making of the American Telephone System**. MIT Press and the AEI Press. pp. 166-171

Saunders, Robert J.; Warford, Jeremy J.; and Wellenius, Bjorn. **Telecommunications and Economic Development-Second Edition**. Baltimore, MD: IDRD/World Bank, 1994, 467 pp.

Gabel, David and Weiman, David (Queens College, CUNY). **Historical Perspectives on Competition between Local Operating Companies: The United States, 1894-1914**.

Hudson, Heather. **Economic and Social Benefits of Rural Telecommunications: A Report to the World Bank**. Washington DC: The World Bank, 1995, ?? pp.

Hudson, Heather, E. **When Telephones Reach the Village: The Role of Telecommunications in Rural Development**. Norwood, NJ: Ablex, 1984

MacMeal, Harry. (1934). **The Story of Independent Telephony**. Chicago, IL. p.24.

Organizaion for Economic Cooperation and Development, **Mobile Communicatons: Pricing Stategies and Competition**, OECD Publications Service, Paris, France, 1995.p.41

Wellenius, Bjorn and Stern, Peter A. **Implementing Reforms in the Telecommunications Sector--Lessons from Experience**. Washington DC: The World Bank, 1994, 757 pp.

Hanna, Nagy; Guy, Ken; and Arnold Erik. **The Diffusion of Information Technology--Experience of Industrial Countries and Lessons for Developing Countries** (World Bank Discussion Paper 281). Washington DC: IDRB/World Bank, 1995, 207 pp.

Wellenius, Bjorn; Stern, Peter A.; Nulty, Timothy E.; and Stern, Richard D. **Restructuring and Manning the Telecommunications Sector**--A World Bank Symposium. Washington DC: 1989, 146 pp.

Office of Technology Assessment-Congress of the United States**. Global Communications--Opportunities for Trade and Aid**. Washington DC: U.S. Government Printing Office, 1995, 183 pp.

Office of Technology Assessment-Congress of the United States. **Perspectives on the Role of Science and Technology in Sustainable Development**. Washington DC: U.S. Government Printing Office, 1994, 101 pp.

National Telecommunications and Information Administration-U.S. Department of Commerce. **Lessons Learned from the Telecommunications and Information Infrastructure Assistance Program**. Washington DC: U.S. Department of Commerce, 1996, 48 pp.

Kayani, Rogati and Dymond, Andrew**. Options for Rural Telecommunications Development** (World Bank Technical Paper 359). Washington DC: IDRD/The World Bank, 1997, 118 pp.

Mayur, Rashmi and Daviss, Bennet. **How NOT to Develop an Emerging Nation**. The Futurist. January-February 1998. pp. 27.

_____. **Sustaining Success Stories Abound**. EPRI Journal-Powering the

World Bank. World Development Report 1994--Infrastructure for Development (World Development Indicators). New York: Oxford University Press for IBRD/The World Bank, 1994, 254 pp.

see _____. **The Last Frontier--Phone frenzy in the developing world is charging up the telecom industry** (Special Report) Business Week. Sept 18, 1995. pp. 99.

Mansell, Robin and When, Uta. **Knowledge Societies: Information Technology for Sustainable Development**. New York: Oxford University Press for the United Nations, 1998, 323 pp.