Preface

During the last two decades, information and communication technology have empowered societies in different and diversified ways with their continuously emerging tools and techniques. Implications of these technologies are affecting different sectors including: education, health, governance, trade, tourism, and entertainment amongst other sectors. Moreover, social and economic relationships are dramatically changing giving societies, businesses, governments and other economic establishments the platform to increase and diversify productivity as well as contribute to business and economic development and growth. Information and communication technology have led over the last decades the transformation process at the individual, organizational and societal level. However, for information and communication technology to succeed and continuously remain effective in the future, it must change and adapt to global and local environmental elements.

The platforms, vehicles and tools of information and communication technologies are numerous and are changing all the time. Newly emerging tools are being introduced and gradually the collectivity of such tools are having implications on most sectors of the economy and for many of the different aspects of our daily life such as the way we do business, conduct research, communicate with people, get entertained and study. More is envisioned in the near future where state-of-the-art information and communication technology is perceived to dominate in the 21st century. One of the growing platforms that were enabled by the Internet and the World Wide Web evolution has been the establishment of the marketspace through the new momentum of doing business in the digital economy or “electronic business.”

Understanding how much electronic business and its different business models will have implications on development and growth and how will it introduce change to the society at large is an issue that is extensively under study especially that some of the research reports indicate that by the end of 2005 more than 25% of global trading will be conducted through the digital economy. This is increasingly becoming feasible with the growth in the volume of Internet users that has reached by September 2004 around 750 million users representing the Internet community worldwide. With these figures in
place, it is important to address the issue of the digital divide and how wide is such a
problem growing and what are the implications associated with the digital divide (mainly
negative) that are contributing to widening the gap with the developing world. At the
end of 2003, the developing world accounted for 32% of the community of Internet
users. However, this percentage is expected to increase in the years to come. Moreover,
even if reports and research activities indicate that electronic readiness in the develop-
ing world is lower than in the developed countries, with the massive investments in
information and communication technology, the developing countries are gradually
becoming increasingly integrated into the digital economy.

Policies, regulations, liberalization of services, government-private sector partnerships,
“infrastructure development” and infrastructure deployment are among the important
steps information and communication technology adopters in developing nations are
taking seriously in their quest to close the digital gap with the developed world and
becoming more integrated into the information society. However, it is important to note
that for some nations in the developing world, classical problems still prevail including:
the need for more economic development, low literacy rates, cultural resistance, low
income levels, lack of comprehensive and structured information and communication
technology infrastructure and the need for more comprehensive and effective aware-
ness campaigns on the usefulness and added values and competitive advantages in-
formation and communication technology can bring to the community.

The global economy is becoming an information and communication technology-based
economy. Distance and time barriers are fading away and the world is becoming an
integrated community of buyers and sellers that interact within an internetworked
economy that includes a series of internetworked enterprises. Such global market is
witnessing a phase of transition from a tangible-oriented marketplace to an informa-
tion-based marketspace. This transition promises to lower transaction costs, save time,
and remove distance barriers. All these elements are contributing to the general digital
sense of the world as being one global digital village where people can communicate
anytime and anywhere. The structure of the organization is being re-engineered to fit in
the new global perspective of the marketplace.

Throughout the developing world, many efforts have been taken to attempt to minimize
the digital divide within the developing world and also between the developed and the
developing nations. This included the formulation of national information and commu-
nication technology plans and programs as well as medium- and long-term strategies
that can help keep pace with the developments taking place in the developed world and
at the same transfer the knowledge and technology infrastructure innovations to differ-
ent corners of the world. These policies include: awareness raising, infrastructure de-
velopment and deployment, communication deregulation and liberalization, investment
in human resources through education and training, and the partnership and involve-
ment of the private sector with the government in the development process. Many such
developments and directions are geared by the continuous diffusion of information
and communication technology throughout the world, coupled with the massive intro-
duction of electronic business as a new model and an innovation in conducting busi-
ness that is affecting many aspects of life including different products and services
and creating numerous opportunities for collaboration and growth unlimited by time or
distance or varying cultures.
Electronic business represents a new evolution of trading, offering a borderless global marketspace. For developing countries, electronic business represents a tremendous challenge, but also a great opportunity for growth and development. Business on the Internet is booming and many retailers, brokers and suppliers around the world are actually changing habits in the way they do business by introducing new methods and creating new opportunities through the marketspace. Electronic business is creating a virtual market with innovative virtual businesses and trading communities where firms are outsourcing many of their services and operations, distribution services are becoming online, and buyers, sellers and intermediaries frequently called infomediaries in fields such as computing and the automobile industry are actively integrating their supply chains, thus creating interactive value-added services to businesses and consumers. There is no doubt that electronic business and the Internet represent the opportunity for developing nations to leap forward to more economic development and growth, where the creation of added value will be driven in the 21st century by information, knowledge, and the adoption, diffusion and adaptation of information and communication technology.

Electronic business is estimated to have a value in terms of goods and services traded online around the world to being for both business2business and business2consumer 6.8 trillion US dollars in December 2004 with only around 1% to be estimated for developing nations. However, development and growth indicate that the growth of electronic business in developing countries and the ability of enterprises to benefit from the efficiency gains in their production and distribution processes will be largely dependent on their adoption of business2business practices and not business2consumer. It is through such an electronic business mode that most of the development will take place because they translate into improved competitiveness for enterprises and higher levels of productivity, and hence incomes for the economy as a whole. However, the role to be played by electronic business models such as business2consumer, government2business as well as platforms such as electronic learning and electronic government will also contribute to electronic business on a more macro level.

The changes brought about by the Internet in the global economy will have implications for the competitiveness of the enterprises of developing countries. While some of the factors affecting the evolution of global electronic business including information and communication technology do not respond directly to the national policies of developing countries, it is important to note that governments, business players and other stakeholders will have to play a role in the formulation and implementation of national strategies to ensure that the new opportunities for creating, transforming, applying and exchanging information and value are used to improve the productivity of developing economies and their enterprises.

The effects of electronic business on the organization of the global economy continue to spread and reshape the context in which enterprises, including those from developing countries, must compete in local, regional and international markets. These developments and changes relate to the way business is being done, the business processes and the effective response to customer needs and requirements. Today, the leading region in electronic business in developing nations is the Asia-Pacific region with 50 million new Internet users a year which is faster than any other region in the world including regions from the developed world in terms of Internet community development and growth. It is expected that more regions in the developing world will be
following the same direction with the massive investments taking place in that domain supported by government plans and private-sector support.

Born global, electronic business encompasses a wide spectrum of activities, some well established, most of them very new, and all are blended through a hybrid model of traditional and unconventional components. Driven by the Internet evolution and the World Wide Web, electronic business is dramatically expanding and undergoing radical changes engendering a wide array of innovative businesses, markets and trading communities creating new functions and new revenue streams. Therefore, developing nations around the world should always focus on the strategies that can yield positive payoffs in terms of investment in information and communication technology. The focus should also be on the policies that will lead to positive economic and productivity return in the long term. In that respect, when it comes to electronic strategies and the diffusion of electronic business with its different components such as electronic commerce, electronic learning, electronic government, electronic payment and electronic banking amongst other components of the digital economy, policies followed by the governments of developing nations should attempt to provide an environment in which information and communication technology should realize their full potential. This includes the problems and challenges of awareness, infrastructure development, information access, regulations, human resources and capacities development, local content creation depending on the languages used and the cultures prevailing in the local environment.

In the long term, Internet and electronic business will generate social and economic returns to different countries irrespective of whether they are developed or developing. But those that will invest in adaptable information and communication technology that can provide added values to the community will be felt across the different levels in the society. It is perceived that a well thought business model and the adaptation to the local conditions and the needs of the community represent some of the initial steps that could be taken for the development and implementation of a successful electronic business environment that could have effective implications on the economic and societal development and growth in the context of developing nations.

This book intends to provide a comprehensive survey of developing countries in terms of its information and communication technology platforms that enable the introduction and diffusion of electronic business among its community. The book will address the issues related to electronic business in a number of developing countries including vision, strategies, policies, government and private sector roles, plans, business models, achievements, success and failure cases, and challenges and opportunities amongst other issues. There are many potentials that could be realized at the business and socio-economic development front and this book will try to demonstrate that and present the lessons learned to set supporting guidelines for future implementations combining theoretical foundations with real practical cases.

**Organization of the Book**

This book covers through its 20 different chapters a variety of issues and concepts that relate to the changing nature of doing business online. A brief description of each of the chapters follows.
Chapter I titled “Electronic Business in Developing Countries: The Digitalization of Bad Practices?” addresses the Internet and other advanced digital information technologies and their effective role between developed and developing nations and the discrepancy between the two environments in terms of infrastructure readiness. The chapter discusses the effect of the Internet in general and electronic business in particular with respect to the digital divide through the development of a framework that defines four types of information technologies that shows why the Internet does not provide the same development thrust to all the countries that use it and identifies the differences prevailing. Moreover, the chapter provides an understanding of the difference between information systems that only process information and those that transform or distribute physical goods or control work and how it is frequently believed that the globalization of information networks such as the Internet does not reduce but increases the digital divide — an issue that has raised so many conflicting arguments since the establishment and diffusion of the Internet and the World Wide Web.

Chapter II titled “Role of Culture in Electronic Business Diffusion in Developing Countries” opens the discussion on the different cultural factors and their varying implications on the diffusion of electronic business while studying the different challenges faced and opportunities presenting themselves. In developing countries, culture is considered invaluable and adaptation to the local needs and conditions represents a key element in the successful implementation of electronic business. A number of cases are demonstrated to validate such argument, to assess the levels of technological usage as well as to provide a list of lessons learned to work as a model for possible and similar future implementations in similar contexts and environments of development.

Chapter III titled “International E-Commerce: Language, Cultural, Legal, and Infrastructure Issues, Challenges and Solutions” addresses the issues of language, cultural, legal, and infrastructure as barriers and deterrents to global electronic business through the formulation of a framework with an objective to help organizations meet the challenge of providing online customers with a premium quality experience, regardless of location, language, business practices, and culture, while addressing regulatory issues. The chapter covers a number of the primary issues that represent the major challenges and barriers for proper electronic commerce diffusion around the world and how they could be transformed into platforms for opportunities for these countries to capitalize upon and benefit from the advantages presented.

Chapter IV titled “E-Commerce Infrastructure and Economic Impacts in Developing Countries: Case of India” demonstrates how discrepancies and huge disparities are prevailing in the adoption of electronic commerce across developed and developing countries with examples from the Unites States, the Asia-Pacific region and Africa. The focus of the chapter is the debut of electronic commerce in India in 1999 with the case of electronic selling of merchandise such as musical CDs and books standing currently at a volume of business2consumer estimated to be about 460 million US dollars. This chapter attempts to address the issue of electronic commerce research in developing countries with a focus on: (a) what are the infrastructure enablers of electronic business and their status in a developing country like India?; (b) what is the relationship between electronic business and socioeconomic variables that affect the development and sustainability of electronic business in a developing country like India? The chapter suggests a causal model that highlights factors affecting electronic commerce adoption while exploring issues such as infrastructure enablers, socioeconomic factors rel-
relevant in developing countries and the impact of electronic commerce on the nature of markets.

Chapter V titled “E-Marketplace Adoption Success Factors: Challenges and Opportunities for a Small Developing Country” addresses the use of the Internet and electronic commerce in the late nineties and how it caused the disappearance of intermediaries between buyer and seller and with the advances in the development of electronic commerce technologies, new types of intermediaries were established offering new value-adding services. The new way of doing business is described as electronic marketplaces representing a new business model using innovative and emerging information and communication technology. Doing business in the E-Marketplace enables sellers to enter new markets, to find new buyers, and to increase sales. Electronic marketplace services support the exchange of large amounts of data regarding supply and demand between buyers and sellers, and the implementation of the business transactions. This chapter explores the opportunities and challenges facing electronic marketplaces and the need to develop an infrastructure that can enable the adoption, diffusion and adaptation of electronic business.

Chapter VI titled “E-Commerce Activity, Opportunities, and Strategies in Latin America” analyzes international differences in electronic business activities and strategies with a focus on the region of Latin America and between Latin and non-Latin markets both from a macro and micro perspectives. The chapter focuses on three cases of electronic business evolution comparing cases in Brazil, Chile, and Mexico with an identification of the business models and strategies that are being implemented with an outlook for the future and how electronic business can develop and grow and benefit the economies of the developing world.

Chapter VII titled “Assessing Job Seekers’ Acceptance of Online Recruitment in Egypt” defines the implications of the development in information and communication technology on Internet adoption growth rate with a focus on Web technology and addressing the case of Egypt. The chapter focuses on the evolution of the online recruitment industry that started in Egypt in 1998 and then spread across the community with many businesses addressing this profession. The model proved to be an efficient way to provide better interaction and information exchange between job seekers and employers. The chapter presents a model using the technology acceptance model discussing the main constructs affecting job seekers in embracing emerging information and communication technology. Moreover, the chapter includes appropriate business strategies stemming from the cultural, social and economic variables of a country like Egypt, a developing nation that could be set in order to boost the diffusion and efficiency of online recruitment business.

Chapter VIII titled “Evolution of Telecommunications and Mobile Communications in India: A Synthesis in the Transition from Electronic to Mobile Business” addresses the electronic business evolution and the efforts played by many countries and how they transformed their operations to cater for the platform needs of the digital economy. The chapter also addresses the migration to mobile business and the growing potentials made available for developing nations. The chapter focuses on the case of India with a demonstration of the transition of its domestic economy into the digital economy and the possibilities and regulations of permitting foreign direct investment, and the deregulation of the telecommunications industry opening up to private competition. There is also the coverage of the role of the government. The chapter aims at capturing the
transition of India into the digital world, by examining the key influencers such as the evolution of telecommunications and mobile communications and the effect of information technology on government initiatives.

Chapter IX titled “Critical Success Factors for E-Brokerage: An Exploratory Study in the Brazilian Market” investigates the critical factors for the success of stock brokerage processes via the World Wide Web, using financial portals on the Brazilian Internet, from the perspective of the investor. The chapter presents the framework of the online stock trading system to be able to compare the traditional form of stock brokerage with the one introduced and made possible by the Internet. Issues such as intermediation and disintermediation as part of the overall process are also covered in the chapter.

Chapter X titled “E-Readiness and Successful E-Commerce Diffusion in Developing Countries: Results from a Cluster Analysis” addresses the continuing growth of electronic commerce and the prospects in the years to come and the strategies formulated that can help diffuse electronic business. The chapter addresses the issue of the digital divide and the gap between developed and developing nations mainly due to lack of electronic readiness. Therefore, the chapter attempts to explore the relationship between electronic readiness and successful electronic commerce diffusion. The objectives of the chapter are to: (a) present a conceptual framework of e-readiness and e-commerce success; (b) identify the constructs and variables to operationalize the framework; (c) report on the e-readiness and e-commerce success assessments of a sample of business organizations from South Africa; (d) explore the effect of e-readiness on the successful diffusion of e-commerce; and, (e) identify the theoretical and practical implications and lessons for businesses in other developing countries.

Chapter XI titled “An Overview of E-Commerce Security and Critical Issues for Developing Countries” addresses electronic commerce issues such as infrastructure, lack of awareness, network payment and secure transaction services as challenges to developing countries. The chapter focuses on the need for a secure infrastructure which makes possible the electronic exchange of financial transactions as a necessary prerequisite.

Chapter XII titled “Venturing the Unexplored: E-Readiness Assessment of Small and Medium Enterprises in Egypt” focuses on the issue of electronic readiness. Some of the issues covered are combinations of indicators such as e-connectivity, human capital, business climate, leadership and others. Few studies have attempted to evaluate e-readiness from a micro perspective. This chapter attempts to adopt a micro approach to assess e-readiness of SMEs in an Arab country. The objective of the research is to assess the e-readiness of SMEs in the textile, specifically garment, industry in Egypt, and in particular, evaluate their preparedness for electronic commerce. The research is exploratory in nature, and represents a first step towards more extensive research to assess the preparedness of different sectors in Egypt for embracing and internalizing ICTs.

Chapter XIII titled “Offshore Outsourcing: An E-Commerce Reality (Opportunity for Developing Countries)” focuses on investments and promoting foreign direct investment in developing countries. This chapter discusses the solutions enabled through information technology through offshore outsourcing. Today, the exchange of information in real time has made possible for companies to widen their horizons and look for independent suppliers in different nations. This chapter focuses on India as a country which has managed to exploit the opportunities enabled via offshore outsourcing.
Chapter XIV titled “Adoption and Implementation Obstacles of E-Banking Services: An Empirical Investigation of the Omani Banking Industry” explores the potential impeding factors that could inhibit the wide adoption and use of electronic commerce applications in the Omani banking industry. Top management perspectives and attitudes toward electronic commerce adoption and use of internal information systems/information technology competencies and success are some of the focal points in the chapter. Other factors such as power relationships, such as conflict between managers that arise during the process of information systems adoption, and lack of investment in electronic commerce applications are also covered. The findings are vital for electronic commerce strategies development and implementation in developing nations.

Chapter XV titled “Open Sourcing E-Learning for Developing Countries” addresses one of the critical success factors for developing countries in advancing their intellectual capacity. The Internet offers countries information access to the entire world, offering many educational resources that can effectively develop a global knowledge base. This chapter realizes that much of the Internet content is oriented towards the needs and interests of developed countries. Therefore, the chapter proposes an approach for developing countries to pool efforts to create a digital commons of electronic learning resources that are appropriate and relevant to their specific needs.

Chapter XVI titled “Strategic and Operational Values of E-Commerce Investments in Jordanian SMEs” aims to articulate lessons learned from a quantitative study of Internet technology use in Jordan. The chapter addresses the issues related to electronic commerce as a new way of doing business for SMEs. However, it also focuses on the challenges faced, including the technological infrastructure, legislation and organizational infrastructures ready for the digital economy.

Chapter XVII titled “E-Commerce Infrastructure in Developing Countries” and how it caters for the potentials of developing nations is the focus of this chapter. The preparation and deployment of the building blocks is invaluable for the success of electronic commerce diffusion and adoption. Many other elements are important such as the financial and legal framework. This chapter highlights the technologies required to establish electronic commerce and also provides an overview of the present situation of infrastructure development for electronic commerce in developing countries.

Chapter XVIII titled “An E-Commerce Longitudinal Case Study from Ukraine” identifies key value-added e-business applications and focuses on success factors that clearly support small enterprise goals. Performance factors are presented that show the impact of electronic business applications on the organization’s bottom line. The chapter explores some lessons learned from a case in the Ukraine with investigation of a number of issues including telecommunications, energy, hardware, software, and the availability of technical skill. The chapter covers a number of electronic business issues such as: (a) difficulty of the user interface, (b) lack of a planning process for e-business applications, (c) development and testing concerns, (d) finding the Web site and a lack of branding, and (e) lack of evidence to support a formal budgeting process.

Chapter XIX titled “E-Business in India: Early Evidence from Indian Manufacturing Industry” explains how the manufacturing and especially automobile industry has changed from traditional brick and mortar business to click and brick e-business within the digital economy.
Chapter XX titled “Challenges and Opportunities for Information Brokers in Brazil: A Study of Informational Needs of Southern-Brazilian Enterprises When Expanding Their Businesses” covers a study that was developed as a part of a program of research into information intermediation via the Internet, focusing on the informational needs of Southern-Brazilian enterprises when expanding their businesses. The research was conducted with the support of SEBRAE-RS. This chapter presents information needs and identifies the challenges and opportunities for information brokers in Brazil.