**The Internet and Its Impact on the Globalization of Commerce**

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# *Abstract*

*The Internet Economy has grown more rapidly than anyone could have envisioned even five years ago, opening up new vistas of communication, collaboration and coordination among consumers, businesses and trading partners. What started out as an alternative marketing channel has quickly turned into a complete economic system of interconnected electronic markets. The use of the latest Internet technologies has greatly facilitated market efficiency and liquidity. For example, online banking has become a very vibrant segment of the Internet Economy in the past few years, challenging the traditional banks in many areas of finance. The U.S. market accounts for an overwhelming share of the e-business transactions, with other industrialized nations trying to catch up. However, the majority of the earth’s population – the five billion people who live in developing countries – must address the challenge from the networking revolution that is unfolding in the developed world. Part of the developing world will be projected into a turbulent period of rapid progress, but most will be left behind, locked into vicious circles of poverty and instability as the gap between rich and poor widens again. The right mix of national and corporate policies and programs can enable some countries to move from being victims to beneficiaries, but only if networking development moves up the hierarchy of development priorities.*

**1. E-commerce Revolution**

Starting around 1994, the Internet Economy has grown at a much faster pace than the Industrial Revolution that began in the 18th century. Perhaps more importantly, the potential scope, size and overall economic impact of this economic system is much larger than what we can comprehend today. What started out as an alternative marketing channel has quickly turned into a complete economic system consisting of: (i) ubiquitous, low cost communication networks using Internet technologies and standards; (ii) applications and human capital that enable business to be conducted over this network infrastructure; (iii) interconnected electronic markets that operate over the network and applications infrastructure; (iv) producers and intermediaries providing a variety of digital products and services to facilitate market efficiency and liquidity; and (v) emerging policy and legal frameworks for conducting business over the Internet.

The key characteristics that distinguish the new economy are information, knowledge and speed. In the traditional economy, companies rely on physical assets to create value, and have often owned the value chain to minimize the risk of relying on others. In the Internet Economy, smart companies are relinquishing ownership of most of the value chain activities. Instead they are relying on real-time information and customer knowledge, and leveraging Internet based partnerships with suppliers and contract manufacturers to do business in the most productive and efficient manner. The secrets of success involve "advantaged relationships" with trading partners such as, knowing and fulfilling customer needs, anticipating future requirements, using online customer knowledge to create new products and services, designing pricing and promotion schemes that match customers' willingness to pay, and building network-based alliances and partnerships.

The Internet Economy is made up of companies directly generating all or some part of their revenues from Internet or Internet-related products and services. These companies are the Internet infrastructure and Internet applications players, such as Cisco, Dell, IBM, HP, Oracle, Microsoft and Sun, whose products and services make it feasible to use the Internet for electronic commerce. For example, IBM sells servers and PCs that are used to gain access to the Internet. Similarly, 3Com sell modems and Cisco sells routers, all used to gain access to the Internet. The Internet-related revenues from these companies are included in the estimates for the entire Internet Economy.

Then there are companies selling products and services over the Internet. Electronic commerce, or e-commerce, includes all types of retail sales to customers for which the transactions and payments take place on open networks like the Internet. This includes pure Internet based sellers like Amazon.com and eToys.com as well as bricks-and-mortar companies, such as LL Bean and Alaska Airlines, who are also conducting a part of their business on the Internet. Furthermore, there are electronic intermediaries or Internet middlemen, such as eBay or EGroup, who act as catalysts by facilitating the interaction between buyers and sellers. So the overall Internet Economy is made up of the revenues of infrastructure and applications players, electronic intermediaries and online sellers.

A combination of regulatory reforms and technological innovations have enabled e-commerce to flourish as it has. Although the precursor of the Internet appeared in the late 1960s, Internet e-commerce took off with the arrival of the World Wide Web and browsers in the early 1990s and the liberalization of the telecommunications sector and innovations that greatly expanded the volume and capacity of communications (optic fiber, digital subscriber line technologies, satellites). As a result, barriers to engage in e-commerce have progressively fallen for both buyers and sellers. Today, for a few thousand dollars, anyone can become a merchant and reach millions of consumers world-wide. Though only less than a decade old, e-commerce has the potential to radically alter economic activities and the social environment. Already, it greatly affects such large sectors as communications, finance and the retail trade. It also holds promise in areas such as education, health and government.

Over the last few years, much of the attention devoted to e-commerce has resulted from the spectacular growth in the level of activity and market valuation of some business-to-consumer (B-to-C) e-commerce companies such as Amazon.com or eBay. However, this is somewhat misleading as most of the e-commerce revolution was actually happening elsewhere, namely in business-to-business (B-to-B) transactions, which involves transactions between enterprises (e.g., among manufacturers and their sub-contractors, or between business equipment firms and their clients). Even in the more developed B-to-C market – the United States – B-to-B segment currently accounts for at least 80 percent of total e-commerce activity[[1]](#endnote-1). In the B-to-C market segment, concerns about security of payment, potentially fraudulent merchants, and privacy of personal data affect its growth potential.

Four broad themes have emerged to understand the economic and social impact of the e-commerce revolution:

1. *Its dramatic growth and potential.* Starting around 1994, the Internet Economy has grown at a much faster pace than the Industrial Revolution that began in the 18th century. While electronic data exchange between large companies has developed steadily over the last fifteen years, there has recently been an explosion of growth in retail e-commerce and in transactional use by small businesses. The global e-commerce market is expected to reach $1.2 trillion by 2001[[2]](#endnote-2), starting from virtually zero in 1990. E-commerce is poised to become a major component of cross-border flows: estimates range between 10 and 25 percent of world trade by year 2003.[[3]](#endnote-3)
2. *The major impact it will have on barriers to market entry.* E-commerce destroys many existing market barriers, including geographic and market separation barriers (e.g., products and services available in one country but not in another, for a variety of reasons), custom and practice barriers (e.g., products and services sold only through intermediaries, such as travel agents), and business scale barriers (e.g., the ease with which small e-commerce start-ups can quickly become major players in an established market, such as Amazon.com in book-selling).
3. *E-commerce transforms the marketplace.* E-commerce is transforming business, by reducing transaction costs (resulting in improved efficiencies and new business opportunities) and accelerating rates of change. E-commerce will change the way business is conducted: traditional intermediary functions will be replaced, new products and markets will be developed, and a closer relationship will be created between business and consumers.
4. Most importantly*, e-commerce vastly increases interactivity in the economy.* These linkages now extend to small businesses and households and reach out to the world at large. People will increasingly have the ability to communicate and undertake business transactions anywhere and anytime. This will have a profound impact, resulting in the further erosion of economic and geographic boundaries.

Besides its impact on business, e-commerce is also affecting governments and people in fundamental ways. It affects *government* by increasing efficiency and changing interactions with the outside world, affecting the speed and availability of information, and challenging existing regulatory frameworks. It affects *people* by reducing prices, creating new products and services, increasing choices, changing working methods, and, on the negative side, by creating possibilities of social exclusion.

It is not surprising that the United States, where the Internet technologies were first put to use, is leading the way in terms of e-commerce volumes. Currently, the United States holds around 60 percent of the global e-commerce markets. Estimates are that about 28.4 million U.S. households will shop online in 2000, up from 17.4 million last year[[4]](#endnote-4). Forty-four percent of U.S. companies are selling online; 36 percent more companies say they will do so by the end of the year.[[5]](#endnote-5) U.S. online retail revenues will hit US$38.8 billion, up from US$20.3 billion in 1999.[[6]](#endnote-6) U.S. business trade over the Net will skyrocket to US$251 billion, up from US$109 billion in 1999. To site one example, U.S. e-commerce in health care will reach US$16 billion, a 150 percent increase over 1999, and US$450 million will be spent online to purchase prescription drugs.

The United States, however, no longer holds a monopoly on e-commerce, as Western Europe is progressively catching up. Most available data shows that the U.S. will retain its global lead in e-commerce volumes well into the next decade, but that many European countries (led by Scandinavia) will soon reach the United States figures on a per capita basis. It is also predicted that Europe will surpass the U.S. in e-commerce spending on consumer products in 2002.[[7]](#endnote-7) European consumers are increasingly buying from local vendors as opposed to US vendors, according to a new e-commerce study conducted by Jupiter Communications.

**2. Internet Banking**

Internet banking refers to the use of the Internet as a remote delivery channel for banking services. Such services include traditional ones, such as opening a deposit account or transferring funds, among different accounts, and new banking services, such as electronic bill payment, allowing customers to receive and pay bills via a bank’s website. Banks offer Internet banking in two main ways. An established bank with physical offices can establish a website and offer Internet banking to its customers in addition to its traditional delivery channels. A second alternative is to establish a “virtual,” “branchless,” or “Internet-only” bank. The computer server that lies at the heart of a virtual bank may be located in an office that serves as the legal address of such a bank, or at some other location. Virtual banks may offer their customers the ability to make deposits and withdraw funds via ATMs or other remote delivery channels owned by other institutions.

As the financial sector deals with “virtual” products that are easily digitalized, this is one of the industries that have most willingly embraced the Internet economy. The advent of the Internet is an important challenge for financial institutions, pushing them to compete online for their corporate and retail customers as well as to streamline inter-bank business links. Specifically, the IT revolution has enabled the following changes in the financial sector[[8]](#endnote-8):

1. In electronic financial transactions, utilization of the Internet with its characteristics of speedy, low-cost communication, can permit a drastic reduction in transaction costs. While the cost of a banking transaction related to a branch is estimated at US$1.27, at an ATM it is US$0.27, and on the Internet it costs merely US$0.01. Similarly, the traditional full service broker in the U.S. is charging around US$150 per trade, the discount broker is asking for US$69, while online broker’s cost is only US$10.[[9]](#endnote-9)
2. By eliminating the limitations of time and distance, electronic financial transactions can make cross-border transactions easier, and thus make it possible to provide services to customers on a global scale. In effect, online finance may eventually lead to complete globalization of financial services, making the national borders irrelevant.
3. Electronic financial transactions have helped create new services such as the “virtual financial site” that includes services crossing the traditional borders between financial services as well as “aggregation” that allows consumers to obtain consolidated information about their financial accounts in one place.
4. Since electronic financial transactions, especially those in online retail banking, are being conducted on open networks centered on the Internet, many challenges arise in terms of transaction security, consumer protection and privacy. The existing systems of financial regulation and supervision are being amended to reflect the changes in technology.

Retail banking illustrates well the changing nature of financial services. Online banking puts the power of banking into the hands of the customer and allows the customers to self-service themselves with all their banking needs, just as customers have become used to getting money from an ATM instead of going to the cash desk in the bank. With this online service, customers can view their account details, review their account history, transfer funds, order checks, pay bills, re-order checks and get in touch with the customer care department of the bank. In most cases, there is no special software to install other than a web browser and many banks do not charge for this service. The only transaction that currently can’t be done is withdrawals of cash, but banks are working on resolving this problem.

One of the crucial issues being addressed today is the impact of e-banking on traditional banking players. As was already noted, e-banking transactions are much cheaper than branch or even phone transactions. This could turn yesterday’s competitive advantage – a large branch network – into a comparative disadvantage, allowing e-banks to undercut “bricks-and-mortar” banks. Because the e-banks are relatively easy to set up, a lot of new entrants will arrive in the market. These actors will not be encumbered by the “old-world” systems, cultures and structures. Instead, they will be adaptable and responsive. Since e-banking gives consumers much more choice, customers will be less inclined to stay loyal. The border-free nature of the Internet means that e-banks will be truly global institutions, thus making it easier for them to compete with traditional banks.

“Bricks-and-mortar” banks will find it difficult to evolve. Not only will they face increased competition from the domestic e-banks, but they will also be vulnerable to foreign banks, entering the market with new, cheap online services. (This is already happening in Japan, where the U.S. banks were finally able to enter a very closed market thanks to the active use of innovative technologies, including Internet-based services). Deposits will go elsewhere with the consequence that traditional banks will have to fight to regain and retain their customer base. This will increase their cost of funds, possibly making their business less viable. Lost revenue may even result in these banks taking more risks to breach the gap.

In the end, there is probably no better way for traditional banks to respond to the e-banking revolution that to fully embrace it. Traditional banks that have so far resisted the move online will have to offer Internet banking shortly. If they do not, they will risk being at a competitive disadvantage in a market where the Internet is rapidly becoming as mainstream a banking channel as bank branches or ATMs. Experience in Scandinavia (arguably the most advanced e-banking area in the world) appears to confirm that the future is “clicks and mortar” banking. Customers want full service banking via a number of delivery channels. Needless to say, all banks wanting to succeed online will have to offer excellent technology support, customer service and online banking functionality.

The sheer volume of financial operations conducted online makes them very prominent in the new global economy. As is to be expected, the United States has the most developed e-banking industry, with almost half of the estimated 50 million online banking users in the world residing in this country.[[10]](#endnote-10) Only 21 percent of U.S. users are using the services of an online bank at this moment, but the sheer volume of users means that it is still a critical market for growth. Online banking in the U.S. is currently growing at an annual rate of 60 percent, and this growth is expected to accelerate in the near future.[[11]](#endnote-11) According to a recent study, the key features of the U.S. e-banking market are as follows[[12]](#endnote-12):

* Only 20 percent of national banks offered Internet banking in the third quarter of 1999. However, as a group, these “Internet banks” accounted for almost 90 percent of national banking system assets and 84 percent of small deposit accounts.
* All the largest national banks offered Internet banking, but only about 7 percent of the smallest size banks offered it.
* Institutions with Internet banking outperformed non-Internet banks in terms of profitability.
* Banks with Internet-based services tend to rely less on interest-yielding activities and core deposits than do non-Internet banks.
* Customer use of Internet banking is disproportionately concentrated among a few large banks (e.g., Wells Fargo, Bank of America, Citibank and a few others). The five banks with the greatest number of online customers account for almost 36 percent of all Internet banking users.
* Projecting from banks’ plans as of late 1999, 50 percent of all U.S. banks will be offering Internet banking by the beginning of 2001. Most of the growth in new Internet banking will be due to small banks coming online.

The only area of the world that is keeping pace with the United States in terms of e-banking development is Western Europe. In 1999 nearly 60 percent of e-commerce in the United Kingdom was concentrated in the financial services sector and that with the expected ten-fold increase of the British e-commerce by 2004, it is envisaged that this share of the financial services will increase even further. More than one-fifth of the Finnish and Swedish bank customers are already online, which puts these countries ahead of the United States in terms of e-banking access. The number of visitors to financial sites in France and Germany has soared since the start of the year by 88 percent and 63 percent respectively[[13]](#endnote-13). In both countries, visitors to financial sites are more likely to be men between the ages of 35 and 49, who have been using the Internet since 1996. According to NetValue, 43 percent of home Internet users in Germany now use online financial services, while in France, Switzerland and Belgium the figure is about 34 percent. In contrast, a recent study found that only 2 percent of Internet users in Russia and Egypt planned to bank online this year[[14]](#endnote-14).

**3. The Internet Revolution and the Developing World**

The exponential growth of the global Internet economy poses a serious challenge to all national economies. Inevitably, not all countries around the world have benefited equally in the transition to the new economy. On every relevant measure – from the size and penetration of telecommunications markets to the extent of Internet usage or the level of global e-commerce – the vast majority of economic activity related to new technologies is concentrated in the industrialized world. Conversely, developing countries account for a small fraction of the global digital economy. Concerns about these disparities between industrialized and developing countries have touched off a worldwide debate about the existence of a global digital divide.

This gap becomes most acute in the world distribution of Internet hosts. Two countries, namely Canada and the United States currently contain 65 percent of all Internet hosts; together with Europe they represent 88 percent of the world total of Internet hosts. At the same time, in spite of the higher rate of increase in Internet hosts in many regions of the developing world, all together still represent a mere 6 percent of Internet hosts, that is, at the same level as Japan, which itself is lagging behind the American and Western European competitors.[[15]](#endnote-15) Ninety percent of the internet users are in the developed world.

The low level of Internet penetration inhibits the development of e-commerce in the developing world: less than 5 percent of global e-commerce currently takes place outside Europe and North America.[[16]](#endnote-16) In online finance, for example, e-banking, e-brokerage and other Internet-based financial services, are still a very marginal activity in the majority of developing countries. Only a dynamic minority among this countries, dubbed as “emerging markets”, with relatively advanced local banking and capital markets systems, are aggressively entering into the online stage of the financial services business.

Where does the Middle East stand in this picture? There are now 1.9 million Arab users but this only translates into 0.7 percent Internet penetration in the entire Arab world, which has 248 million inhabitants. However, these figures hide significant regional disparities, with Internet penetration in the Gulf Co-operation Council (GCC) region being more than fifteen times higher than in the Arab world as a whole.[[17]](#endnote-17) Although the GCC countries account for less than 12 percent of the Arab world’s population, more than 60 percent of the region’s Internet users live in these countries. Penetration in the United Arab Emirates stands at 15 percent, while it is 6.1 percent in Qatar, 6 percent in Bahrain, 5.7 percent in Lebanon and 5 percent in Kuwait. In Yemen it is only 0.07 percent.

This information is not surprising since the general population of the GCC countries tends to be high earning and well educated. However, although the correlation between the use of the Internet and the level of per capita income is strong, it does not tell the whole story. For instance, while Estonia has considerably lower per capita income that United Arab Emirates (UAE), the number of hosts there is ten times higher, with 30 percent of Estonians having regular access to the Internet. What is even more astonishing, some 10 percent of Estonia households engage in electronic banking, which puts this country well ahead of many West European economies. What makes Estonia such an e-success case is the combination of innovative corporate strategies and credible public policies, ensuring a stable legal and institutional framework; improving education and training educators; and acquiring technical assistance from various sources.

Meanwhile, Internet penetration rates in the Arab world in general tend to be quite low, as are credit card penetration rates and consumer purchasing power rates. Except in Israel and the UAE, the Internet has yet to reach the critical mass on which e-commerce activities can begin to flourish. Although the number of users is currently doubling every year, industry analysts in the region fear that Internet growth could be seriously hindered after 2002 by the lack of adequate technological infrastructure. Many of the region's countries have yet to build a modern Internet backbone, while others have only recently completed their networks. The monopoly of incumbent operators in many of these countries has held back the development of Internet technical infrastructure (with the exception of the UAE's Etisalat). The other principal barrier to the Internet's growth has been the affordability of PCs in a region marked by relatively low per capita GDP.

Notwithstanding these obstacles, there has been a number of encouraging developments in the region in the past few months. In mid-2000, online banking has made a debut in Saudi Arabia, with National Bank and National Commercial Bank are now offering web-based services to customers. The country's other ten major banks are making plans to follow, but banking analysts say the services may take off slowly, because of lack of awareness of Internet services and concerns over online security. In Bahrain, a new e-commerce law is under consideration that would tackle issues such as legal barriers and electronic signatures. And the UAE has announced ambitious plans to establish Dubai Internet City, a free trade zone dedicated to cultivating Internet growth and e-commerce. The Dubai government will invest US$200 million in the zone. The plans include the establishment of an Internet university that offers short courses in e-commerce, design and management, an R&D center and a science and technology park. A survey conducted in the UAE by Intel (U.S.) found that 42 percent of companies are currently planning to set up e-commerce operations within the next year. Intel expects e-commerce in the Middle East to grow from its present value of a few hundred million dollars to more than US$2 billion by 2002.[[18]](#endnote-18)

In general, there is evidence of a strong push by corporate businesses of some developing countries towards the Internet. For example, according to “the Global Competitiveness Report 1999” more than 40 percent of companies from China, Columbia, Jordan, Mexico and South Africa are using the Internet for e-commerce purposes, while countries such as Japan, France and Switzerland are lagging behind them.[[19]](#endnote-19) It is also expected that the growth rates of e-commerce would be higher for the developing regions. In other words, general observations about the “digital divide” hide a very uneven diffusion of e-commerce throughout the world where some developing countries use the global and cheap medium of the Internet to catch up with the industrialized world. With the Internet Economy being the way of the future, the countries and companies that are slow to embrace it will be left out of the new global economy. At the same time, given the right mixture of corporate and government policies, the Internet Revolution presents developing countries with an unparalleled opportunity to significantly accelerate and spread the benefits of economic development.

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