

Chapter 23: Global E-commerce

“[O]rdinary citizens will learn more about people in other countries. They will buy more readily from abroad – not just goods, but also services..”

An interview with Frances Cairncross, author of *The Death of Distance*, text available at http://www.deathofdistance.com/html/an_interview_with_frances_cairncross.html.

Prologue

Ms. Cairncross goes on to give some examples, and to predict the consequences of this increased globalization as a result of the Internet: “Buy a foreign movie or use a foreign secretarial service, and you start to build a relationship with another nation. As international trade in services grows, it will create stronger bonds between countries than trade in goods has done.” Her prediction about increased international trade in services has already begun to take hold. A British investor can buy US stocks online. A US consumer’s technical support question on email gets routed to India for a response. Large firms are moving entire departments that handle internal business services overseas. To some extent there will be a chicken and egg problem: much of this trend will take place between countries with shared languages, or nations that already have economic ties or knowledge of each other. However, such ties will only be strengthened by regular electronic interactions across the globe, and may eventually spread to countries that are initially excluded.

What is happening with e-commerce in other countries? How is it different from the US, and how is it similar? What are the ongoing and likely future impacts of e-commerce on international markets for skills and services, markets for capital, and international trade in goods and services. What economic principles will determine how these changes occur? How will governments deal with ways of interacting and transacting across borders that may defy traditional modes of regulation and taxation? This chapter briefly examines these questions.

23.1 Introduction

The Internet is global in its origins and essence. Despite the early lead of the United States in taking advantage of the Internet's potential for enabling commercial activities, other nations have not been slow to jump on board. In this chapter, we review some of the developments in e-commerce from a global perspective. Section 23.2 provides an overview of institutional and economic differences among different regions of the world, with respect to e-commerce enablers such as Internet and telecommunications infrastructure. We provide an example – that of online groceries – to show that other countries have had success with online initiatives where US efforts have failed. The lesson is that understanding how e-commerce is developing in different countries can be helpful.

In Section 23.3, we look at the important case of global markets for skills and services. Lemons problems still mean that crucial aspects of such markets will still be conducted in traditional ways, through face-to-face meetings and traditional contracts. However, the ability to communicate rich information routinely and at low cost means that services such as customer support and internal business processes can now be outsourced to different countries with some confidence. The fact that these services can be reduced to digital processes and communications is crucial to this development. In Section 23.4, we examine a particular case of digital services, that of finance. Whereas interfirm interactions and transactions have long been conducted electronically, the Internet extends this possibility to individuals and households. Thus, just as online trading in US stocks has become common for US investors, investors in countries such as the United Kingdom can do the same, with only small additional set-up costs.

Global provision of skills and services, including financial services, are just an example of how the Internet enables international trade to occur more efficiently. We explore e-commerce and international trade in Section 23.5. There are two different impacts of the Internet and the Web. First, when products and services can be digitized, transportation costs are dramatically lowered. In such cases, there can be strong incentives for locating production where costs of design and manufacture are lowest, distributing outputs online. Even in the case of physical products, the Internet makes information exchange richer and less costly. This can promote international trade by reducing transaction costs. Even small firms or individual entrepreneurs can try to reach customers around the globe.

Section 23.6 examines some of the challenges that the free flow of information across national borders poses for country governments. In addition to issues of defining laws and regulations to enable or promote cross-border e-commerce, national governments have to deal with a host of issues relating to enforcement of domestic laws and regulations for activities such as gambling, pornography, and so on. They also have to establish new rules and methods for dealing with cybercrimes, and they have to work out how to coordinate legal frameworks and enforcement actions with other countries' governments, particularly since cybercrimes may easily involve cross-border interactions between victim and perpetrator. Section 23.7 concludes the chapter.

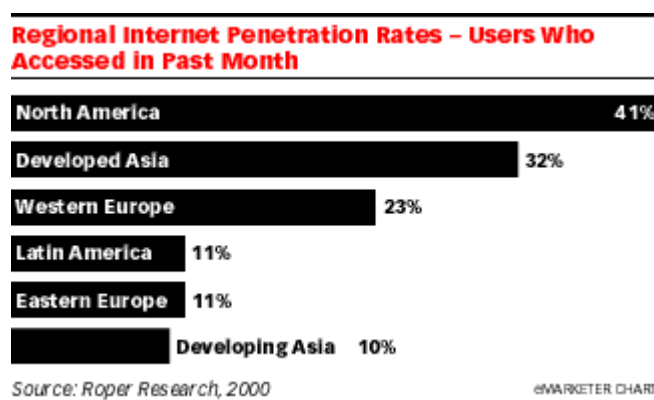
23.2 Beyond the US

There are several differences between the United States and the rest of the world when it comes to the impact of the Internet and e-commerce. The greatest and most obvious difference is that very few countries have per capita incomes or standards of living as high as those in the US. How well off a country is naturally affects its ability to build out the infrastructure required for the Internet, as well as the willingness and ability of people in that country to pay for the new products and services enabled by the Internet. We will discuss the role of e-commerce for poorer countries later in this section. First, we examine e-commerce in countries that are close to the US in per capita income, and have similar economic structures. These include Canada, Australia, Japan, and the nations of Western Europe.

Among the factors that have affected how the Internet and e-commerce have developed in industrialized countries other than the US are the history of adoption of Internet-related technologies and products such as personal computers and cell phones; institutional factors such as the organization of the telecommunications industry and its regulation and pricing practices; and geography, language and culture in general. In many cases, these factors have intertwined. For example, because PC penetration in the US was already relatively high by the 1990s, and telecommunications usage charges were low, the commercial uses of the Internet first took off there. The availability of software in English and the size of the initial market tended to reinforce this early lead, making the US the center of the early enthusiasm for e-commerce. Another factor contributing to this trend was the flexibility, quantity and competitiveness of the supply of venture capital in the US.

A comparison of Internet penetration rates in different regions of the world is shown in Figure 23.1 below. The most striking feature is how much Western Europe lags behind the US. We will discuss the reasons for this difference next, in terms of demand and the costs of Internet use.

Figure 23.1: Global Internet Usage



The most fundamental driver of Internet usage may be the simple economics of demand for what Internet access makes possible. While much Internet content is available at no direct cost, there are some basic costs of Internet access and usage, and the level and structure of these costs appear to be major determining factors of differences in Internet infrastructure and usage across the world's richer countries. There are three components of the costs of Internet usage: the

means by which access is made, the underlying traditional (voice) telecommunications infrastructure, and the Internet infrastructure that complements and increasingly intertwines with traditional telecoms. We discuss each of these cost components in turn.

First, despite the promise and increasing use of wireless handheld devices – including some types of cell phones – as a means to access the Internet, the main method remains PCs. These machines may be in the home, office, or cybercafés. Home PCs first became popular in the US, where they were initially developed. Before the advent of the Internet, they were viewed as tools for managing household finances, other home activities, and for entertainment and education, using various kinds of software. The use of the English language for much early software, plus the competitiveness of the US retail market (leading to lower prices) made household PC penetration much faster in the US than in countries with comparable income levels. Office PCs were also initially much more common in the US for similar reasons. As PC prices have fallen and software has been developed in multiple languages, other countries have tended to catch up with the US. The growth of the Internet in the US also made it more attractive for entrepreneurs in other countries where PC penetration was lower to offer Internet access through cybercafés, where the individual user does not pay the fixed cost of the PC, but implicitly shares it with other users. Thus, for rich countries, the cost of the access device may no longer be a major differentiating factor for Internet usage.

The most significant difference in Internet costs across countries lies in the traditional telecom infrastructure. While broadband access is very slowly becoming available at the household level, the main method of Internet access for households is through dialing up on a traditional telephone line. In many countries, such as Japan, the UK, and other West European countries, traditional telecommunications tend to be rather high cost, often because of lack of competition. In addition to high levels of charges, the pricing structure is often not conducive to Internet use. Traditional local telephone service is typically metered, for example, charged by the minute. This may have been reasonable when circuits were scarce and telephone calls meant to be brief and businesslike. It makes exploring on the Internet, or engaging in commercial activities, relatively expensive. In contrast, local telephone calls in the US are typically priced on a per call basis, irrespective of the call length, or based on a monthly flat fee. In either case, the user has no marginal cost of staying online. The evidence seems to bear out the importance of this aspect of costs, since countries with flat (unmetered) rates have more widespread Internet infrastructure and greater usage. Besides the US, countries in this category include Australia, Canada and New Zealand. All these happen to be English-speaking, but the UK, with metered telephone rates, lags substantially behind, indicating that language is no longer a major factor. We have focused on dial-up access, but broadband access, more common in offices, also requires some piggybacking on the existing telecoms, and high costs can hurt there as well.

The third and final cost component is access to the Internet itself, through ISPs. While traditional telecoms providers have been reluctant to give up metered charges, ISPs have moved toward monthly flat rate pricing. Sometimes this has gone to the extreme of ‘free’ Internet access, leaving the user to pay only the telephone charges. Since flat rate pricing for Internet access has become quite common across countries, telephone usage charges have become the main influence on marginal Internet usage. However, to the extent that ISPs have to pay high charges to telephone companies, their monthly fees for Internet access may be pushed up. While

high flat fees will not deter marginal Internet usage, they can easily deter someone from signing up in the first place.

We have discussed why the rich countries of Western Europe may lag behind the US in Internet use. The high cost of using the telecom infrastructure seems to be a significant factor. This reason is also relevant for the developing countries of Latin America and Asia, where lower incomes are a further important explanatory factor in lower Internet usage. In some cases, the problem is not the high cost of using the telecom infrastructure, but simply its absence. For example, the majority of homes in India do not even have telephones. In such cases, it may seem that the Internet and e-commerce are completely irrelevant. However, technological change is making this too hasty a conclusion. In particular, there are prospects that low cost access devices can be developed for combined voice and data access, and that wireless local loops can be used as a cost-effective way to extend the telecom infrastructure to poorer communities. Cyber kiosks have already proved effective where the network infrastructure has been present, allowing farmers to check crop prices, weather forecasts and even buy and sell livestock.

In developing countries, rural Internet initiatives are often government sponsored, or funded by nongovernmental organizations (NGOs) interested in promoting development. They are often purely noncommercial in nature, though commercial uses may arise as the fixed costs of Internet access provision fall further. In cities of the developing world, where better off citizens reside, the Internet has served as a medium to obtain content (news and entertainment) and to communicate, but it has not really taken off as a vehicle for other forms of e-commerce. In the case of physical goods, the barriers that have led, in the US, to the demise of ambitious start-ups such as Webvan and eToys are present with greater force in developing countries. In particular, it is difficult to substitute for existing ways of shopping when the opportunity cost of leisure time is low. The upper middle class in developing countries may anyway enjoy home delivery, or have domestic servants whose cost is much lower than that of employees of organized firms.

The situation in Western Europe is somewhat different, since incomes and the opportunity cost of time are higher. While there have been many e-commerce failures in Europe as well as the US (e.g., online clothing retailer Boo.com, which crashed spectacularly), there have been many successful online initiatives in Europe. Internet portals, online book and music sellers, and providers of financial services have all made their mark in Europe as in the US. In many cases, American firms have entered European and Asian markets with online initiatives, to be met by competition from local firms in response. In other cases, US firms have acquired local firms that had been first movers. In the case of physical goods, distribution from local sites can be important. On the other hand, for digital goods and services, there is the potential for distance not to matter. Even here, however, local tastes and preferences will require differentiation. Yahoo! Japan must provide content in Japanese, even if it hosts the content on servers located in the US. With streaming media on the Internet increasing the importance of avoiding delays and congestion, even content storage may now be more geographically dispersed.

One striking example of online success in Europe comes from Britain's Tesco supermarket chain. In contrast to the failures of online grocery shopping providers in the US, Tesco has been able to come close to breaking even on its online business. As is often the case

with e-commerce, the product range offered changes when the store goes online. The online store is able to offer a range of durable goods, as well as personal financial services that would typically not fit into a traditional physical store (see Figure 23.2).

Figure 23.2: Online Groceries in Britain



An important point to note is that the warehouses referred to on the web page displayed in the figure are not Tesco's own dedicated warehouses. In fact, one of the reasons Tesco has been able to do well is that it avoided these heavy fixed investments. Instead, shipments are made from Tesco partners or affiliates. The company had calculated that dedicated warehouses would make economic sense only if half the population were shopping online for groceries, whereas by 2001 Tesco.com's share of the overall UK grocery market was still only 0.25 %.¹ Several other aspects of Tesco's approach suggest useful lessons for all e-commerce firms (see Illustration Box). Thus, even though most of the high profile e-commerce start-ups have been in the US, success stories may well be found beyond its borders.

¹"Tesco picks up extra reward points," Glynn Davis, *The Guardian*, Thursday May 31, 2001, <http://www.guardian.co.uk/online/story/0,3605,498682,00.html>.

Illustration Box Keys to Online Success: Tesco

British supermarket chain Tesco made a success of its online venture through a combination of old-fashioned learning-by-doing, a strategy rooted in realistic economic calculations and projections, and judicious and innovative use of information technology. Some highlights from a newspaper report:

Having chosen a store-based strategy, Tesco was able to concentrate its efforts on making it work. "We had to go into the stores to work out what we were going to do," says Browett [CEO of Tesco.com]. "It was tricky and we spent a lot of time getting the model right, initially at a small number of stores." ...

Unlike other retailers, which tried to roll out chains of warehouses before there was sufficient demand, Tesco took one step at a time, ironing out problems and tinkering with its model before rolling out its internet service.

David McCarthy, food analyst at Schroder Salomon Smith Barney, ... adds: "It is like a retail decathlon. There are 10 different events and, even if you only win each one by a small margin, it all adds up. Tesco has done it quietly and done it right." ...

Elements Tesco has got right include automated carts in-store, which are used to pick goods. Orders are beamed on to the picking carts, which advise the operator on the most efficient way to navigate around the store. "Nobody else is doing this. It's a puzzle why people don't understand industrial processes," says Browett.

Tesco is also the first company to develop technology to show customers one of 240 different websites depending on which store will deliver their goods. This enables the company to offer a wider range of goods - up to 40,000 lines - compared to its competitors, which may only have a core range of goods that they can guarantee are available in all their stores - around the 10,000 level.

Source: "Tesco picks up extra reward points," Glynn Davis, *The Guardian*, Thursday May 31, 2001, <http://www.guardian.co.uk/online/story/0,3605,498682,00.html>.

23.3 Global Markets for Skills and Services

We discussed how markets for some kinds of skills have developed online. In particular, technical expertise in the area of information technology is particularly amenable to this process. Open source communities such as the developers of Linux, and the "knowledge marketplaces" created by firms such as HotDispatch are examples. In such cases, those who are sharing or selling their skills online are scattered around the globe. As long as they have an Internet connection, they can participate in online transactions involving their skills.

In the case of individual transactions that are initiated and completed purely online, lemons problems (see Chapter 7) are potentially high. Individuals can overcome these by offering free or low-cost advice initially, building up reputations over time. They can post information on their qualifications and employment records, which may be subject to limited verification online. Thus, even in the absence of traditional methods of face-to-face certification

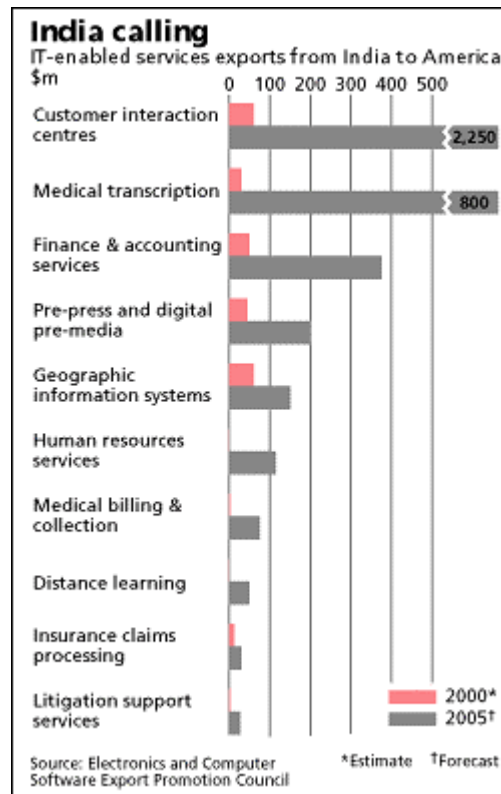
or quality assurance, online markets for skills do develop. However, information problems are likely to be much greater when individuals are in different countries. Global markets for skills are therefore much likelier to be mediated by intermediary firms.

In some cases, the globalization of markets for skills has been driven more by lower costs of transportation and of traditional telecommunications. “Body shoppers” are intermediaries that recruit skilled IT workers from developing countries with lower wages, and brings them to industrialized countries (particularly the US, but also Japan and several West European countries) for temporary assignments with local firms. In such cases, the intermediary is responsible for overcoming lemons problems, by being the long run carrier of reputation. Where physical proximity is essential, the costs of temporary physical relocation cannot be avoided. Increasingly, however, certain types of tasks can be and are provided over the Internet. In many cases, the firm in the developed country will avoid an explicit intermediary, either outsourcing to a firm in a developing country, or creating a subsidiary, division or regional office in the developing country.

Certain kinds of routine tasks are particularly well suited to outsourcing and electronic communications. Depending on its nature, the work can be electronically shipped in batches or routed as it arises, performed in an office halfway across the world, and electronically returned. For example, the software development and use life cycle includes analysis and specification of requirements, design, coding, testing, installation, maintenance and support. Out of these activities, coding and testing in particular involve *relatively* routine IT skills that India’s workforce has in large absolute numbers (though small relative to the total population). US firms have been increasingly using India’s IT professionals to perform these tasks, using the Internet to ship code back and forth, and to communicate during a project where required.

Software development is not the only skilled task that can be performed at long distance using the Internet. Numerous back-office tasks related to internal business processes as well as to interactions with customers can be and are being handled in this manner. Examples include data entry and conversion, answering queries (e.g., technical support), processing claims, performing accounting tasks, and troubleshooting problems. For example, US firms such as GE, American Express and Amazon.com have all transferred some back-office operations to India. There are still issues of reliability and quality, but these are more general issues with outsourcing, and the main point is that distance is no longer a barrier, as long as there is adequate Internet infrastructure. In fact, distance may even help, in cases where time differences can be exploited to speed turnaround times on projects: nighttime in the US is midday in India, for example. While the current levels of long-distance Internet-enabled operations are still relatively small, they are viewed as having the potential to grow enormously, as the infrastructure becomes more reliable in other countries, and as those workers’ training and experience increases. Figure 23.3 shows such optimistic projections for the case of India.

Figure 23.3: Internet-Enabled Services Projections



Source: *The Economist*, May 3, 2001, "Back Office to the World".

In the recent past, substantial barriers to international migration have acted as checks on the development of globalized labor markets. To some extent, international trade in goods and services substitutes for labor mobility in its effects on wages, but the practical impact has been much less than would be predicted in a world of free trade and perfect competition. Wages adjusted for productivity have remained quite different across different countries. As firms have become more willing and able to transfer capital and technology across national boundaries, there has been some effect on wages: workers in multinational firms in developing countries like India are often paid more than their peers working for local firms, even when they are locals and not expatriates from the multinational's home base. The ability to perform many more kinds of services across national boundaries bypasses restrictions on the movement of labor, and clearly globalizes labor markets in cases where this was not possible before. For example, the ability of US firms to outsource substantial components of their business processes overseas – using the Internet as a base – can have a much greater impact on the labor markets in the US and in the receiving countries than do programs that allow the limited entry of skilled workers into the US.

23.4 Global Finance

The barriers to international capital movements have, on the surface, been less severe than those on labor. While many developing countries have tried to restrict the entry of foreign capital, more and more have welcomed foreign investment. Countries such as the US and other

industrialized countries, on the other hand, have long permitted capital to flow in and out relatively freely, much more so than the case of movements of people. How will the Internet affect the movement of capital around the world?

We may begin with the familiar case of personal financial services, where the Internet may matter most, since it gives greater access to individuals. In the case of many other aspects of finance, dedicated connections and proprietary software have globalized financial markets much earlier. We discuss some of those other aspects below. In Chapter 20 we stressed how individuals are now able to obtain large amounts of financial information as never before, at low or zero cost, and in a timely fashion. The existence of the Internet and the World Wide Web has made this possible. It is natural that this access is not constrained by national boundaries. For example, US brokerage houses that would earlier have had to be quite large to establish global presences, have begun to make inroads into other countries' markets for financial services. E*Trade is still working to establish itself in the US, but has been quick to enter the UK market as well, first establishing a joint venture, then buying out its partner to create a wholly-owned subsidiary (see Illustration Box). The E*Trade UK web site allows British residents to trade online in US stocks, with only some additional tax information to be provided (see Figure 23.4).

Illustration Box
How E*Trade Entered Britain

E*TRADE was founded in 1992 as the world's first electronic broker. Originally available through America Online and Compuserve, it responded to the booming demand for online investment services and had its own Web site by 1996.

ESI, founded in 1993 became the first Web site outside the USA to provide real-time equity prices and stock trading and soon became a prime destination for UK investors.

In 1998, ESI and E*TRADE Group founded E*TRADE UK. E*TRADE Group acquired E*TRADE UK in January 2000

Source: http://www.etrade.co.uk/about_i_etuk_story.shtml.

E*Trade is not alone in going global rapidly on the back of the Internet. Other US firms with online presences in Britain, for example, include Charles Schwab, DLJ Direct, and TD Waterhouse. Often, the main barriers are regulatory restrictions, and national institutional peculiarities. Entry is often easier in countries that share feature such as language or past membership in the British Empire. For example, TD Waterhouse currently services customer accounts in Canada, Australia, and Hong Kong as well as the US and UK. Entry into markets that are more distant in terms of economic structure or institutional features is often accomplished through the traditional route of joint ventures, but access quickly becomes global. Using TD Waterhouse as an example again, the company recently announced joint ventures in India (with Tata Finance Limited) and Japan (with The Bank of Tokyo-Mitsubishi, Ltd.) to pursue online financial services in those countries. Again, subject to restrictions placed by

national governments and regulators, individuals should be able to trade shares across national borders much more easily than in the past. Certainly there are no barriers to information gathering. The individual US investor can track stocks in Asia and Europe, and can trade through local online brokers (sometimes subject to knowing the local language!). These local firms may compete with US entrants, or simply with each other. Mergers across European boundaries (e.g. German online broker Direkt Anlage Bank buying France's Selftrade – see Illustration Box) are also occurring.

Figure 23.4: E*Trade UK, British Investors and US Stocks



Online stock trading by individual investors is the most obvious way in which the Internet affects financial markets. The free flow of information and the While dealing with different nations' tax laws and some governments' restrictions on moving money in and out of their jurisdictions will continue to act as barriers to cross-border equity trading by individuals, another barrier is likely to become lower, as national stock exchanges link up or even merge. Since the fixed costs of maintaining physical trading floors are high, there has been a movement away from regional stock exchanges in Europe as well as in the US. At the same time, purely

electronic trading options (ECNs) have emerged as new competitors. As long as the ECNs are allowed to connect freely with the incumbents such as the NYSE and NASDAQ, the latter exchanges' network economies do not give them an overwhelming advantage. Geography does not matter in this new world, but access to large networks does. The pressure will be on European exchanges to either consolidate² or link up, and this will help remove one barrier to cross-border online trading, since it will make it easier for brokers to offer trading in stocks issued in different countries.

Illustration Box **Valuing a Firm by its Customer Base**

The September 2000 all-stock deal in which Direkt Anlage Bank took over Selftrade valued Selftrade at \$1.28 billion. This is equivalent to \$42,774 for each of its 30,000 customers. The price looked steep to some, when compared to the current valuation of DAB, which was closer to \$16,900 per user. But analysts at WestLB Panmure said the deal was at a "currently normal price," which amounts to about \$268 per expected transaction in 2001, similar to the market value placed on Commerzbank (CRZBY)'s Comdirect, which is seen as one of Europe's premier brokers.

Source: http://www.security-informer.com/english/crd_online_246524.html

Individual trading of other financial assets, ranging from mutual funds (essentially re-sliced packages of stocks) to bonds to foreign exchange is also made easier by the Internet, though in the case of assets such as bonds and foreign exchange there may be high fixed costs or high risks that work against direct individual participation. These factors operate within national boundaries, and are therefore just as or more important when the asset is issued abroad. Even if a US financial intermediary offers the assets (say, a mutual fund that holds shares only in Asian firms) to a US investor, the informational barriers are not overcome by the kind of information that is available on the Internet. The distinction is similar to the one made in Chapter 21, between "low bandwidth" and "high bandwidth" information. The first category consists of data that are objective and relatively easy to verify. The second category includes factors that are difficult to assess except through direct contact and observation, or through expertise. The lack of high bandwidth information is a major reason for the movement of capital across countries to be lower than would be predicted in cases where institutional and legal barriers are absent. In particular, the evidence is that domestic savings and investment tend to be highly correlated across countries, indicating that people are reluctant to move their money to other countries for investment purposes. Another way to put this is that lemons problems remain, even with the Internet. A good illustration of this effect occurs for the highest "touch" financial market of all – venture capital. In this case, there is a great degree of localization and clustering, even within the

² This will require some standardization of listing requirements, and even of accounting conventions – the latter, in particular, is a thorny issue between the US and Europe, though perhaps less so within the European Union.

US. The conclusion is that the Internet alone will not drastically alter the globalization of finance in the short run.

23.5 International Trade

One aspect of international trade in the context of e-commerce is the ability to deliver digital products and services across national boundaries, using the Internet. A separate issue is the impact of greater information availability. In both cases, the ability to complete transactions online is an additional feature, though not an essential one. The examples of skills provision and financial services provision that we discussed in the previous two sections are cases of electronic delivery across national boundaries. Small IT projects may be handled entirely online. In other cases, there is typically some face-to-face meeting (the high bandwidth information exchange) and agreement, followed by more routine exchanges or deliveries of services that take place online. For retail financial services, the entire interaction may be conducted online. The UK investor trading in US stocks can fill out the application forms, transfer money into a US account, and trade without using paper or moving from her screen. Commissions earned by E*Trade then represent a payment for services that are international. Spending on services by a British tourist while traveling in the US would be similar in its impact on international trade statistics: the Briton pays US service providers.

Countries often have customs duties or tariffs on imports, and these clearly affect international trade. They may also use quantitative restrictions on the entry of certain goods and services. An extreme case of this would be a total ban. Various reasons for restricting international trade do exist: government revenue raising, control of undesirable materials, protection of some domestic groups, and so on. Individual country choices made without coordination may lead to outcomes that are worse for all countries. Therefore, in order to try to achieve some measure of cooperation that can improve outcomes, the nations of the world have formed the World Trade Organization (WTO) to frame and enforce rules for international trade. Having such an organization does not remove conflicts, but it provides a mechanism for more orderly handling of disputes, as well as a clear set of “rules of the game.”

The current provisional WTO agreement is that electronic transmissions should not apply to electronic transmissions over the Internet. In the cases of the Briton purchasing US stocks or a US hotel room while on vacation, this leads to a symmetric treatment of online and offline transactions. In other cases, however, there is a difference. Thus purchasing a large number of music CDs from another country might be subject to a customs duty (small purchases from abroad are exempt in the US, though not in many countries), but obtaining the same quantity of music as electronic files would escape the import tariff. This is superficially similar to the issue of sales taxation within the US (Chapter 22), but here we are looking across national borders, and in the US sales tax case, the tax must be paid if the transaction is instate rather than across states. Hence the two cases are somewhat different, though broadly related in spirit.

In addition to digital delivery of skills and software, the global Internet also allows all kinds of news and entertainment content to be transmitted internationally. We will discuss some of the issues this raises for governance in the next section, and the broader social impacts in the next chapter. Here we note that, aside from regulatory issues there are tremendous potential

impacts for information-related industries. For example, while distributing a magazine such as *The Economist* is relatively expensive to do in its traditional paper form, often making it unaffordable except for very small groups of readership, online content can be made available globally at very low marginal cost. The constraints here are server capacity and bandwidth (both becoming less binding) and the possession of means of access (PCs at work or in the home). Provided the content seller is able to identify where the subscriber is normally based, price discrimination can be used more effectively compared to traditional print, where high local distribution costs would constrain the ability to vary prices.

Given the relatively low cost of digital distribution for products and services that can be put in that form, one would therefore expect that such methods will be used increasingly, leading to some shifts of production from geographically dispersed locations to wherever costs are lowest. In the case of services related to internal business processes, such as were discussed earlier in this chapter, there is evidence for the beginnings of this process. When the result is a flow of services or products across national boundaries, where they would have earlier been performed domestically, the result is an increase in measured international trade. The transnational outsourcing of services parallels the earlier development of outsourcing of some kinds of manufacturing, particularly assembly tasks in electronics products. At the abstract level, the similarities in the two cases are development of local infrastructure and skills, and falling costs of transportation. These factors apply whether the product is composed of atoms or of bits.

The impact of the Internet on international trade, through its ability to increase the quantity and richness of information that is available, applies with at least as much force across national boundaries as it does within countries. The potential for bringing down the costs of matching buyers and sellers, negotiating agreements, and conducting transactions exists, though it may be more difficult to assess factors such as quality and reliability when one is interacting with a party in another country. Countries have traditionally had government-sponsored or industry-level organizations to help individual firms with the additional difficulties of exporting, i.e., selling products and services abroad. The Internet and the Web provide a convenient new mechanism for achieving traditional goals of reducing informational barriers. A good example of such an effort began in Malaysia. MyBiz is self-described as “My Business Relationship Network”, an “e-community”, and a “trading environment”. It therefore has many of the features of the kinds of B2B exchanges that have been developing (Chapter 12), with some features of incubators (Chapter 11) thrown in. Unlike the case of third-party B2B exchanges in the US, which have foundered in the face of opposition from large firms with established vendor or purchasing relationships, MyBiz acts as a vehicle for small and medium-sized Malaysian firms to reach export markets more effectively (see Illustration Box below). MyBiz was created in 1999, and has since expanded to other Asian countries, including Singapore and South Korea..

Illustration Box
MyBiz as International Trade Facilitator

Here is how MyBiz describes the range of its functions as an intermediary serving the interests of small and medium enterprises (SMEs) in Asia:

MyBiz is My BusinessRelationshipNetwork™. It is an online trading environment - an eCommunity - which enables SMEs to create secure, multiple yet unique buyer-seller relationships. It allows SMEs to choose the way they run their business, and gives you the chance to concentrate on what you do best by outsourcing non-core products and services to others....

In effect, Asian SMEs can now function as a virtual multinational, and compete with other multinationals in a borderless world. Competing and collaborating as one business eCommunity, the SMEs in MyBiz are able to penetrate markets worldwide, gain access to technology and resources without having to incur high costs, as well as tap into the collective knowledge of the industry's best practices.

When you create your BusinessRelationshipNetwork™ at MyBiz, the benefits are clear.

- You link instantly to multiple buyers and sellers in the eCommunity
- You increase revenues by achieving vast global penetration
- You reduce transaction costs and improve competitiveness
- You overcome barriers of time and geography
- You achieve greater control of your business processes

With MyBiz, you enjoy full end-to-end eCommerce capabilities without incurring the full cost of technology:

A Complete Set of Online Trading Tools

A Reliable Source of Online Intelligence

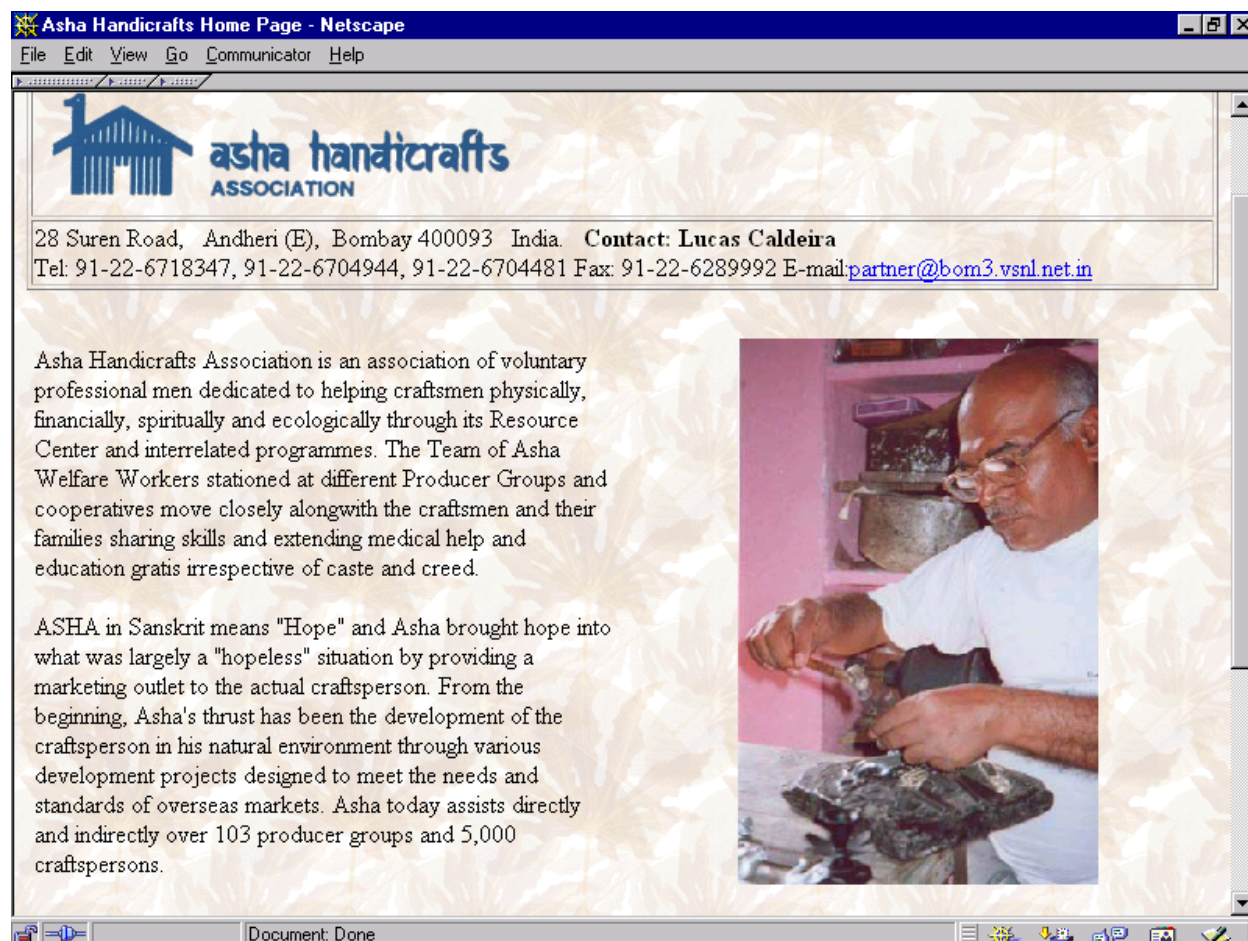
A Wide Range of Support Services

An Experienced Group of People

Source: <http://www.mybiz.net.my/mybiz/guidedtour/main.htm>

As we have noted in other contexts, the kind of information that MyBiz can provide does not remove the potential need for traditional face-to-face interactions, at least when a relationship is being formed. However, it reduces the cost of much of the search process, in terms of where a potential buyer might want to invest more time and money in gathering the information necessary to decide whether or not to transact. Furthermore, once a relationship is established, the ongoing costs of routine information exchange and even transactions are reduced. In such case, the products that are traded may well be traditional physical products: e-commerce does not involve transforming the products, but rather changing the nature of the search and transaction processes. Even in this case, the savings in terms of transaction costs may be substantial enough to significantly boost international trade. For small consumer items such as handicrafts, the Internet and Web provide a cost-effective way for even rural artisans to advertise globally (see Figure 23.5).

Figure 23.5: A Rural Indian Handicrafts Seller on the Web



23.6 Governance

International trade provides the focus for global governance issues surrounding e-commerce. In Chapter 22, we discussed some of the issues that each national government faces in the wake of the Internet's rise, including privacy, security, consumer protection, competition policy, and more. Increased exposure and access to other countries' products, services and information means that national governments may not find it optimal to act totally independently, but instead they may choose to seek to coordinate policies. Policy coordination issues are not restricted to e-commerce, of course, but extend to all kinds of economic issues, ranging from traditional trade policy to intellectual property rights to domestic competition policy. In general, international linkages mean that domestic policies have consequences for foreign countries. Where these consequences are in the nature of an "externality" that markets cannot handle adequately, there is a potential role for policy coordination that can make all participants better off. International trade agreements are a major example of this, since they are designed to prevent countries from pursuing "beggar-thy-neighbor" restrictions on imports.

The case of e-commerce heightens the degree of interdependence, since digital information, products and services can flow relatively unchecked across national boundaries. This is an issue to the extent that such flows might be viewed as intrinsically undesirable or

because they undermine national government policies with respect to regulation, taxation and the like. We discussed these issues in Chapter 22, primarily in the context of the US. Not only do other national governments face the same issues domestically, all governments must deal with cross-border flows. For example, if online gambling sites can be hosted on some small island, but accessed from anywhere in the world, national governments will have a harder job regulating gambling by their citizens.

A separate set of issues arises because the flow of online information across borders has the potential to improve the efficiency of matches between buyers and sellers, as we discussed in the previous section. For international e-commerce to work as well as possible, there must be a well-established set of technologies and legal rules with respect to a host of areas that affect transactions: electronic contracts and signatures, electronic payments, digital encryption, and so on. Traditional rules that determine jurisdiction by location are much harder to apply when transactions are conducted chiefly or wholly in cyberspace. The locations of the servers that host information are not a valid guide, bringing one back to principles of location of physical activities of firms. However, where parties to a transaction are not well-identified legal entities such as public firms, government problems are much more difficult. In such cases, the problems are not so much ones of increasing the efficiency of legal and positive activities such as international trade, but rather difficulties in controlling illegal activities.

Prime examples of governance issues arise in the context of cybercrime. One example of cybercrime is, of course, various kinds of “hacking”, or malicious interference with computer systems, including launching computer viruses and worms. Other kinds of cybercrime include copyright violations and Internet-enabled fraud such as sales scams. All of these kinds of crime exist within national boundaries – the Internet inherently makes cross-border crime much more possible, and enhances the need for government coordination. For example, the Council of Europe, an organization consisting of almost all European countries (see Illustration Box), recently drafted a convention on cybercrime, which tries to lay out procedures for cooperation among member governments, as well as guidelines for national governments in drafting new legislation, for an array of online crimes, including the following³:

1. Offences against the confidentiality, integrity and availability of computer data and systems
 - Illegal Access
 - Illegal Interception
 - Data Interference
 - System Interference
 - Illegal Devices
2. Computer-related offences
 - Computer-related Forgery
 - Computer-related Fraud
3. Content-related offences
 - Offences related to child pornography
4. Copyright and related offences

³ See <http://conventions.coe.int/treaty/en/projects/cybercrime.htm> for the full text of the draft convention.

In addition to defining crimes, the convention also outlines procedures for search and seizure, for record keeping, and for coordination of crime-fighting efforts. In essence, governments have to devise new crime-fighting tools to handle new methods for committing traditional crimes, and the Internet increases the likelihood that victims and perpetrators will be in different jurisdictions, thereby increasing the need for policy coordination.

Illustration Box
What is the Council of Europe?

The Council of Europe is an intergovernmental organisation which aims:

- to protect human rights, pluralist democracy and the rule of law;
- to promote awareness and encourage the development of Europe's cultural identity and diversity ;
- to seek solutions to problems facing European society (discrimination against minorities, xenophobia, intolerance, environmental protection, human cloning, Aids, drugs, organised crime, etc.);
- to help consolidate democratic stability in Europe by backing political, legislative and constitutional reform.

Source: [http://www.coe.int/portal.asp?strScreenType=100&L=E&M=\\$t/1-1-1-1//portal.asp?L=E&M=\\$t/1-0-2-2/02/EMB,1,0,2,2,Overview.stm](http://www.coe.int/portal.asp?strScreenType=100&L=E&M=$t/1-1-1-1//portal.asp?L=E&M=$t/1-0-2-2/02/EMB,1,0,2,2,Overview.stm)

The Internet is a global communication and transaction network, and this global feature inherently transcends national boundaries. National governments can try to limit the impacts of the Internet by limiting the access of citizens, or by blocking particular sites, but in doing so they run the risk of also limiting the positive uses of the Internet, for legal e-commerce. Thus countries face twin problems of promoting the good and controlling or limiting the bad. In doing so, they must learn to cooperate in new ways with each other, on issues ranging from trade to intellectual property rights to cybercrime.

23.7 Conclusion

In this chapter, we have looked briefly at some of the international dimensions of e-commerce. Each country's experience with the Internet is somewhat different, shaped partly by its institutions, history and level of development. However, access to the Internet can lead to major changes in how people in different countries view each other and interact with each other. Whereas satellite and cable TV have made it possible for villagers in India to view programs such as Santa Barbara and Baywatch, the Internet provides a different level of involvement. With help from an intermediary, the same villagers may be able to market their handicrafts around the world over the World Wide Web. In less extreme, but no less important examples, investors in Britain can conveniently buy US stocks online. Different countries are quickly trying out approaches to e-commerce, just as is happening in the US. In some cases, such as online groceries, other countries' experiences have lessons for parallel, more prominent efforts in the

US. One of the most important impacts of the Internet and e-commerce will be in the ability to order and deliver digital products and services from anywhere in the world. For individuals and for businesses, this will represent a force that overcomes barriers to trade and to the movement of labor across national boundaries. In all this flux, governments face new challenges, supporting the potential of the Internet for promoting mutually beneficial exchanges across borders, while dealing with new kinds of illegal activity and new ways of committing traditional crimes.

Summary

- While different countries have started with different institutions, regulations and levels of development, the Internet and e-commerce are having a global impact.
- Other countries' experiences can hold important lessons for e-commerce in the US, as in the case of British supermarket Tesco's relative success with online groceries.
- The ability to use the Internet for requesting and delivering various kinds of digital products and services, including routine business processes, customer support, and aspects of software development means that major changes can occur in the global pattern of location of these activities.
- Online retail financial services across national boundaries are also made possible through the Internet, whereas the financial services industry already relied heavily on electronic communications for interfirm dealings.
- International trade in general is made easier, through improvements in information exchange, and consequent reductions in transaction costs. Even very small firms can participate in international trade in a cost-effective manner using the Internet and Web.
- National governments face issues of coordinating policies to support or promote international trade online.
- National governments also face new challenges with respect to domestic policies and regulations whose enforcement may be eroded by international online information flows, as well as in dealing with various kinds of cybercrimes. Again, coordination of policies and enforcement across nations becomes more important.

Questions

1. Try to find three additional examples where a non-US firm has succeeded in e-commerce where US firms have had a difficult time. What are the reasons for the differences in outcomes?
2. What kinds of factors will place limits on the extent of outsourcing of business processes and customer services to other countries?
3. Find three different examples of international cybercrime (e.g., hacking, fraud, copyright violation). How were national governments able to deal with these cases? What kinds of cooperation were necessary?