

ELECTRONIC COMMERCE IN DEVELOPING COUNTRIES

Issues for Domestic Policy and WTO Negotiations

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Electronic commerce and its related activities over the internet can be the engines that improve domestic economic well-being through liberalization of domestic services, more rapid integration into globalization of production, and leap-frogging of available technology. Electronic commerce integrates the domestic and global markets from its very inception. Negotiating on trade issues related to electronic commerce will demand self-inspection of key domestic policies, particularly in telecommunications, financial services, and distribution and delivery.

Technical aspects of electronic commerce, its complexity and the characteristic of network externalities should change the way that developing countries approach the external negotiating process to depend more on cooperative effort through their regional forums (APEC, FTAA). Second, since electronic commerce is characterized by “network externalities,” developing countries should take advantage of the technical leadership coming out of the private sector in the most advanced countries (and their own private sector, even if nascent) and “draft” in behind.

E-commerce is not a service, nor a good, but something that is comprised of both. In the context of WTO commitments, embracing this idea could lead to a liberalizing bias in favor of electronic delivery of goods and services as compared to delivery by a scheduled mode. Rather than view this outcome with alarm, developing countries should encourage it as a positive force that furthers the development both of electronic commerce, as well as engenders deeper liberalization and deregulation throughout the economy.

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SUMMARY

Electronic commerce and its related activities over the internet can be the engines that improve domestic economic well-being through liberalization of domestic services, more rapid integration into globalization of production, and leap-frogging of available technology. Since electronic commerce integrates the domestic and global markets from its very inception, negotiating on trade issues related to electronic commerce will, even more than trade negotiations have in the past, demand self-inspection of key domestic policies, particularly in telecommunications, financial services, and distribution and delivery. Because these sectors are fundamental to the workings of a modern economy, liberalization here will rebound to greater economic well-being than comparable liberalization in more narrowly focussed sectors. Thus, the desire to be part of the e-commerce wave can be a powerful force to erode domestic vested interests that have slowed the liberalization of these sectors.

Technical aspects of electronic commerce, its complexity and the characteristic of network externalities should change the way that developing countries approach the external negotiating process. Specifically, the complexity of negotiations will require more cooperative effort among countries through their regional forums (APEC, FTAA) which heretofore have operated at the periphery of the WTO process. Second, since electronic commerce is characterized by network externalities, developing countries should take advantage of the technical leadership coming out of the private sector in the most advanced countries (and their own private sector, even if nascent) and “draft” in behind. Standing on the shoulders of giants makes sense when network externalities and interoperable standards are key to maximizing the benefits of e-commerce. Trying to develop domestic standards or following the old technique of import substitution to develop a domestic industry is even more economically wasteful in the context of the internet and electronic commerce than it was in more traditional sectors.

Trade negotiations are often the tool used to liberalize domestic sectors. But the complementarity between domestic policy and trade strategy is tighter in the case of e-commerce and the internet. Moreover, this complementarity emphasizes that e-commerce is not a service, nor a good, but something that is comprised of both. In the context of the WTO commitments, embracing this idea could lead to a liberalizing bias in favor of electronic delivery of goods and services as compared to delivery by another scheduled mode. For example, insurance products could be sold over the Internet even if the physical presence of a foreign insurance firm was not scheduled for liberalization under GATS. Rather than view this outcome with alarm, developing countries should embrace it as a positive force that furthers the development both of electronic commerce, as well as encourages deeper liberalization and deregulation throughout the economy.

ELECTRONIC COMMERCE MERGES THE DOMESTIC AND INTERNATIONAL MARKETPLACES

“Electronic commerce” is a shorthand term that embraces a complex amalgam of technologies, infrastructures, processes, and products. It brings together whole industries and narrow applications, producers and users, information exchange and economic activity into a global marketplace called “the Internet.” There is no universal definition of electronic commerce because the Internet marketplace and its participants are so numerous and their intricate relationships are evolving so rapidly.¹ Nonetheless, one of the best ways of understanding electronic commerce is to consider the elements of its infrastructure, its impact on the traditional marketplace, and the continuum of ways in which electronic commerce is manifested. This approach shows clearly how electronic commerce is intricately woven into the fabric of domestic economic activity and international trade.

Electronic commerce as it has evolved today requires three types of infrastructure:

- *Technological infrastructure to create an Internet marketplace.* Electronic commerce relies on a variety of technologies, the development of which are proceeding at breakneck speeds (e.g., interconnectivity among telecommunications, cable, satellite, or other Internet ‘backbone;’ Internet service providers (ISPs) to connect market participants to that backbone; and end-user devices such as PCs, TVs, or mobile telephones).
- *Process infrastructure to connect the Internet marketplace to the traditional marketplace.* This infrastructure makes payment over the Internet possible (through credit, debit, or Smart cards, or through online currencies). It also makes possible the distribution and delivery (whether online or physical) of those products purchased over the Internet to the consumer.
- *“Infrastructure” of protocols, laws, and regulations.* This infrastructure affects the conduct of those businesses engaging in and impacted by electronic commerce, as well as the relationships between businesses, consumers, and government. Examples include technical communications and interconnectivity standards; the legality and modality of digital signatures, certification, and encryption; and disclosure, privacy, and content regulations.

Together, these infrastructures enable electronic commerce to innovate the traditional marketplace in three ways:

- *Process innovations:* Electronic commerce simplifies, makes more efficient, reduces costs, or otherwise alters the process by which an existing transaction takes place. For example, Cisco

¹ For more elaborate discussion of definitions see www.oecd.org/dsti/sti/it/ec/act/SACHER.HTM and Box 1.1, page 28-29 in The Economic and Social Impact of Electronic Commerce, OECD, 1999.

Systems replaced its phone and fax ordering process with an online ordering process and saved more than one-half billion dollars and reduced error rates from 25 percent to 2 percent.² Boeing used computer-aided design and electronic communication to coordinate 238 design teams in the globalized production of the 777 aircraft, a process never before attempted in this way, and which cut error rates by 50 percent, and reduced both costs and time to market.³

- *Product innovations:* Electronic commerce creates or facilitates new industries and products not previously available. For example, MP3 both enables consumers to play music downloaded from a computer and enables musicians to upload music directly to the internet, thereby creating a new medium to produce and consume music; WebMD repackages existing health information in an easy-to-use online format, offers opportunities to “chat” with people with similar health concerns, and provides “real-time” responses to health questions.
- *Market innovations:* Electronic commerce also creates new markets in time, space, and in information that heretofore did not exist because transaction and coordination costs were prohibitively high. For example, the online bank Wingspan offers 24-hour bill payment features; PeopleLink is a global advertising location for artisans in remote parts of Latin America and Africa; reverse auctions through Priceline inform businesses of the exact price a consumer is willing to pay for the products, as well as reduce the consumer’s purchase cost.

In reviewing the infrastructures that make electronic commerce possible, as well as the impact electronic commerce has on the traditional marketplace, we can see how electronic commerce is intricately woven into the fabric of domestic economic activity and international trade.

- *The infrastructures on which e-commerce depends also are key to domestic activity.* The three service-sector infrastructures of telecoms, financial services, and distribution and delivery are critical components for overall economic activity. Comprehensive liberalization of services could raise global GDP by 4 to 6 percentage points—twice that credited to the Uruguay Round—as well as raise the long-run global growth rate from 3.2 to 5.0 percent.⁴ While the transition to liberalization is almost never without cost, liberalizing services promises more comprehensive benefits since services are an input to production in virtually all sectors of the economy. In contrast, liberalization of selected goods sectors has a narrower conduit through which it affects the overall economy.

² OECD, op cit. page 60-61.

³ See www.boeing.com/news/1995/news.release.950614-a.html

- *Electronic commerce is global from the very start.* While traditional borders still matter in the world of international trade, electronic commerce diminishes their importance. No longer do customers need to be physically present to see or hear what they are buying. As a result, companies on the Internet instantly become international: Amazon was selling books to customers in over 40 countries in its first *month* of existence; the company now sells a variety of products to customers in over 160 countries. The electronic marketplace is currently free from explicit trade barriers. The absence of international tariffs or other barriers on electronic commerce encourages more people to try and to continue using the internet marketplace, creating a greater level of efficiency and economic benefit for its participants.
- *Electronic commerce is integral to existing WTO commitments.* While there are currently no explicit trade barriers on electronic commerce, the infrastructures that make electronic commerce possible are still burdened by a myriad of trade and investment barriers. The growth of electronic commerce depends on continued liberalization of these infrastructures, many of which are already part of WTO commitments. Most important are computers and other information technology products (covered by ITA I and under consideration for ITA II), telecommunications (covered by the Basic Telecommunications Agreement), financial services (addressed in the Financial Services Agreement), distribution (relevant under TRIMS), and delivery services (under consideration for GATS 2000), among others. Exploiting the synergies among these service sectors allows electronic commerce to flourish and maximizes economic benefits.

ELECTRONIC COMMERCE IS INCREASINGLY IMPORTANT AS AN ECONOMIC ACTIVITY

Estimates of the growth of internet usage and electronic commerce both within domestic markets and worldwide are notorious for their hyperbole. Even so, each year the actual growth has surpassed the estimate rather than falling short of it. Respected sources such as Forrester Research expect worldwide electronic commerce revenues to surpass \$300 billion by 2002 and accelerate to \$1.3 trillion in 2003. Currently an overwhelming (close to 85%) share of electronic commerce is concentrated in the United States, but diffusion into Europe and Asia, followed by Latin America and Africa will be rapid.

⁴ See “The Globalization of Services: What Has Happened? What Are the Implications?,” by Gary Clyde Hufbauer and Tony Warren, Working Paper no.99-12, Institute for International Economics, October 1999 and OECD, The World in 2020: Towards a New Global Age, Paris: OECD, 1997.

In developing countries internet use and its economic potential are growing exponentially. The share of active internet users in Asia/Pacific Rim, Latin America, and “rest of world” could increase from 23 percent in 1999 to 35 percent in 2002.⁵ In India, for example, the number of internet users nearly doubled in the last year to 270,000, and could rise to over 2 million by the end of 2000.⁶ E-commerce revenues could jump from \$2.8 million in 1998 to \$575 million in 2002. In China, a reported 60 percent of businesses are using the internet, and e-commerce revenues could rise from \$11.7 million in 1998 to \$1.9 billion in 2002.⁷ In Latin America, internet usage rose nearly eight-fold between 1995 and 1997 with revenues estimated to be \$167 million in 1998 and projected to be \$8 billion by 2003.⁸ Africa is fully wired now that Somalia recently added its first ISP; in South Africa, electronic commerce is expected to generate US \$1.1 billion in 1999.⁹

Two important facts about e-commerce are often overlooked. First, the vast bulk of the actual and to an even greater extent the expected growth in revenues from e-commerce comes from business-to-business transactions. In 1998, the ratio of B-to-B over B-to-C was 5.5 to 1; but by 2003 the ratio is expected to be 12 to 1. Second, in virtually all countries other than the United States, electronic commerce is export oriented. In the US, the share of export sales in total e-commerce revenues is only 10 percent, but in Canada it is 83 percent, in Latin America it averages 79 percent, and in Asia/Pacific it is 38 percent.¹⁰

Moreover, the nature of the production process (comprising both manufacturing and services) is becoming increasingly fragmented and globalized.¹¹ Multinational firms and strategic business alliances communicate, get price quotes, submit bids, transfer data, produce product designs, and basically *do business* in an international arena. Countries that do not have an environment conducive to internet usage and electronic commerce will be marginalized from the globalized production process and global economy, at increasingly great cost to their citizens.

These observations have important implications for both domestic policy and international negotiations. First, business to business transactions often build on existing legal and regulatory foundations from physical trade so that issues of content, liability, and encryption

⁵ www.Estats.com, October 1999

⁶ See http://www.emarketer.com/estats/102599_india.html

⁷ See International Telecommunication Union, Challenges to the Network: Internet for Development, October 1999 (updated), page 47, using data from International Data Corp.

⁸ *ibid.*

⁹ See <http://www.nua.ie/surveys/>

¹⁰ ITU, *op. cit.*, Figure 3.2 page 45.

¹¹ For a discussion of the fragmentation and globalization of production in the context of US trade, see Catherine L. Mann, Is the US Trade Deficit Sustainable?, Institute for International Economics, 1999, page 39-40.

are more easily surmounted. On the other hand, the importance of B-to-B and the desire to create a level-playing field for all size businesses highlight the need for the international arena to offer a transparent and codified approach to these issues.

DOMESTIC REFORMS WILL SPEED THE UPTAKE OF ELECTRONIC COMMERCE

Developing countries need to address a number of socioeconomic and regulatory barriers before their electronic commerce and internet use matches that of the United States or Europe. While the socioeconomic challenges are difficult to surmount and will be slower to achieve, the path to reducing regulatory barriers is clearer and the benefits quicker to observe. High Internet access rates, low penetration of electronic means of payment (such as credit, debit, or Smart cards), and cumbersome delivery systems are primary obstacles to the growth of electronic commerce in developing countries.

One area that is most easily quantified and compared is *internet monthly access fees*. ITU data show that these fees vary substantially across countries and that the share of the fees accounted for by ISP charges versus accounted for by local telephone charges also varies substantially. For example, in the US, the approximately \$20 per month internet access charge is all an ISP charge. In Korea, the \$25 charge is about 1/3 ISP charge and 2/3 local call charges. In Brazil, the \$37 charge is nearly all a local ISP charge. In China, the \$65 charge is about half ISP charge and about half a local phone charge.¹² More importantly, when adjusted by the level of per capita GDP, the differences in charges is tremendous. For example, in the US and Australia fees are about \$25 per month, accounting for less than 2 percent of monthly GDP per capita. In contrast, in Mexico, the fee at about \$27 per month accounts for about 5 percent of monthly income and in Mozambique, that \$27 per month accounts for about 70 percent of monthly GDP per capita.¹³

Because the internet creates a new electronic businesses environment, “surfing” is a key way for users to see what businesses are now doing, and what market niches remain to be exploited. Consequently, large “entry” and on-going costs are a great disincentive to internet usage and therefore to the development of e-commerce business both within a country and for international trade. Competition, both for telephone access as well as among ISPs is a key area where government policy can make a difference in access and uptake of the internet.

Second, a supportive *electronic payments infrastructure* is crucial to promote electronic commerce, which exposes a key link between electronic commerce and the financial foundation

¹² ITU, op.cit., Table 9, page A-30.

¹³ ITU, op. cit., Figure 2.8, page 31 and table 9 page A-29 using data for 1998 from the OECD.

of the economy. The efficiency of the payments system itself can help or hinder the development of electronic commerce. Issues of security for transactions, types of electronic media or techniques for making transactions, as well authorization and clearing functions are key aspects of the problem.

Electronic payments require an easy-to-use and secure payment vehicle. Although a number of countries are focussing on “cash on delivery” for tangible products, the future will require a payment method that is on-line so as to accommodate products (both goods and services) delivered digitally. For business-to-business transactions, an easy-to-use electronic payments mechanism is crucial to achieve the cost reductions promised by internet-based commerce. In addition, security for financial transactions is the sine qua non; electronic payment must be secure and legal, with liability clearly identified, limited, and prosecuted.

Eighty percent of e-commerce transactions use credit cards, even as debit, smart cards or digital cash are being viewed as alternatives. Credit-card penetration by countries varies widely and for various reasons. In some countries, including China, the preference for cash to avoid audit trails undermines the use of credit cards as the basis for electronic commerce transactions, even as other forms of internet usage (such as e-mail) has risen. In other countries, such as Taiwan, people are unwilling to use credit cards for internet transactions because there is unlimited liability in the case of fraudulent use of the credit card number. Finally, the additional charge to businesses (which in some cases is transferred in full to the customer) for the use of an internationally recognized credit card can be as high as 5 to 7 percent of the transaction (for example in Bulgaria), much too high to be acceptable to business or consumer.¹⁴

Beyond individual transactions, full efficiency and realization of the benefits of e-commerce depends on rapid authorization, payments, and settlement of accounts through the “financial plumbing” of the economy. At minimum, authorization for transactions between internet businesses and payment institutions (such as credit card companies or banks) needs to be in real time, so as to allow immediate delivery of digital products. Moreover, the shorter the time between authorization and actual payment, the more efficient the transaction and the lower the institutional risk. Many developing countries do not have financial institutions or central bank payments mechanisms that are up to this task.

When countries maintain controls on foreign exchange usage, full participation in e-commerce for international trade is problematical. Some countries allow exporters greater access to international exchange than other businesses (as in Morocco, for example). This strategy could limit the development of electronic commerce by indigenous small businesses who need to

import in order to produce for a market niche in the external or even for the domestic market; Saffron producers, for example, may achieve greater global sales by importing marketing expertise over the internet. The desire to maintain a closed capital account but an open current account (as in Sri Lanka for example) is more difficult when the nature of the internet transactions is not transparent to the authorities; who can tell whether the cross-border credit-card payment was for a US Treasury bond rather than for a Dell computer?¹⁵

Finally, distribution and delivery systems round out the set of service infrastructures that are key components to developing e-commerce. Speed is one of the most important manifestations of electronic commerce. Overnight delivery, just-in-time processing, 24 by 7 operations all are examples of how much faster and more precisely timed economic activities are in the e-commerce world. A country with inefficient distribution and delivery systems and without multi-modal transport for international participation will be left behind in e-commerce.

Moreover, there is a very important link between the effectiveness of the distribution and delivery systems and the incentives for the private sector to innovate and invest in new technology. Suppose the private sector spends money on internet technologies, but cannot get products to customers because of distribution and delivery barriers, as was the case for apparel producers in Sri Lanka attempting to break into the upscale international fashion market. When the economic benefits that might accrue to the private company are eroded by inefficiencies elsewhere in the chain-to-market, it reduces the incentives for further private investment in known technologies as well as creates a barrier to innovating new ideas for the local market.¹⁶

How should policymakers respond to these needs for domestic reforms? First, clear synergies exist between the elements of policy reform. Making substantial progress on one element (such as telephone charges) will reap smaller rewards than expected because of the tight relationship between the three foundations for e-commerce readiness. Second, exploiting existing technology available worldwide has great advantages of interoperability and can jump-start the globalization of domestic producers. Finally, the greatest innovation, profit, and increase in economic well-being will be generated by private sector entrepreneurs serving market niches unique to the home country, since only domestic entrepreneurs are truly able to understand their own market. Domestic policy might favor international infrastructures and overseas innovation when network externalities and interoperability are important to create the needed foundation for domestic initiatives. The ones who benefit will be domestic entrepreneurs.

¹⁴ Examples from field research by the author and colleagues.

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ELECTRONIC COMMERCE AND INTERNATIONAL NEGOTIATIONS IN THE WTO

The WTO has done a substantial amount of work with regard to electronic commerce, but the cross-cutting and rapidly evolving environment of electronic commerce poses a true challenge both to the organizing structure of the WTO (GATT and GATS, and role of subcommittees), as well as to the operational method of its members (request-offer negotiations and negative vs. positive commitments).¹⁷ On the other hand, traditional WTO principles of non-discrimination, transparency, neutrality, and market openness remain valid and should be applied to electronic commerce. New rules are not necessary if liberalizing commitments embodied in GATT, GATS, TRIPs, and other WTO agreements are honored.

Probably the key issue is whether electronic commerce and digitized products should be classified into *GATT*, *GATS*, *both*, or *neither*. The European Union strongly asserts that “all electronic transmissions consist of services;” and, therefore, these products should fall under the purview of GATS.¹⁸ Most countries, including the US, agree that services delivered over the internet are covered by GATS, but other products are more like a good or are a hybrid between a good and a service (electronic books are a popular example). Thus the US is arguing that more time is needed to monitor the development of electronic commerce before any final classification takes place. A key point is that classifying these products under GATS could make their treatment under the WTO less liberal, because market access in GATS exists only in sectors where members have made specific commitments (software downloaded from the Internet, for example, is not covered by GATS). Moreover, whether existing commitments include electronic transmissions as a mode of delivery is itself under contention.¹⁹

A compromise that would yield the greatest liberalization sidesteps the classification issue and requires that WTO members follow the course of most liberal treatment of these products, either under GATT or GATS, particularly when a specific product does not fit neatly within a negotiated service sector commitment. In some cases, this could mean that electronic delivery of goods and services would be treated more favorably than other forms of delivery. For example, financial products or architectural services could be sold over the internet even as the physical presence of a foreign bank or licensing of foreign architects had not yet been scheduled for liberalization under GATS. This liberalization bias engendered by electronic commerce can

¹⁷ The issues on electronic commerce and the WTO are developed more fully in Catherine L. Mann and Sarah Cleeland Knight, “Electronic Commerce in the World Trade Organization,” forthcoming in a conference volume edited by Jeffrey Schott and published by the Institute for International Economics.

¹⁸ World Trade Organization, “Communication from the European Communities and their Member States on the WTO Work Programme on Electronic Commerce,” 9 August 1999.

¹⁹ *Ibid.*

act as a positive force, stimulating further the development of electronic commerce, as well as encouraging deeper liberalization and deregulation throughout the economy.²⁰

Governments do have a legitimate concern that their standards and regulations (e.g., pharmaceutical prescriptions, gambling restrictions, and the prudential regulation of banks) might be undermined by the more favorable treatment afforded by electronic commerce. Now is a good time for governments to review how electronic commerce puts stress on existing standards and regulations, and to decide what combination of private sector response and public legislation will ensure the greatest benefits of electronic commerce for their citizens.

Moreover, societies do differ in their preferences toward certain aspects of privacy and levels of security (among other things), and governments are elected to represent those views. Diversity in the level of government intervention into some areas of governance of the electronic commerce environment could be appropriate, and appears to be inevitable in any case.

Given the global nature of electronic commerce, *governments should try to coordinate (which need not mean harmonize) new regulations* with other countries on a bilateral and multilateral basis. What does this mean? An example in the area of privacy regulation illustrates the idea. As background and in simple terms, the US approach to privacy is to let the private sector offer different levels of privacy, whereas the European Union Privacy Directive mandates a particular level of privacy.²¹ Do these different approaches become a barrier to cross-border trade, or can a “trusted third party”, a private firm, bridge these two approaches to privacy? Such a firm would investigate the privacy policies and methods of the US firm and guarantee that it was abiding by the EU Directive; the EU would give the firm its seal of approval that its methods met the standards of the EU.²² This represents a market-oriented solution to the need to arbitrage across the desire for firms to trade data across borders and the desire by societies (or at least governments) to have different approaches to privacy.

A second issue relevant for developing countries and the WTO is *negotiating method*. This issue grows out of the synergies between the elements of e-commerce readiness. Because of these synergies, country delegations will begin emphasizing the “horizontal” approach to negotiations on electronic commerce. The initial US proposal on services in mid-summer 1999

²⁰ William Drake and Kalypso Nicolaides in their “The Information Revolution and Services Trade Liberalization After 2000”, manuscript for WSC conference “Services 2000: New Directions in Services Trade Liberalization, June 1999, argue that this approach in effect changes the outcome of the negotiations agreed to in the Uruguay Round. As negotiators, they are correct. However, from the standpoint of economic well-being, the liberalizing bias is to be welcomed, not voided.

²¹ The privacy issue is quite complex and evolving and cannot be fully developed here. See Peter Swire and Robert Litan, *None of Your Business*, Brookings Institution, 1998

²² The firm Privacy Council is one company attempting to meet this market need.

argued for the “use of all appropriate negotiating modalities, including request-offer, horizontal, and sectoral approaches.”²³ In the horizontal approach, negotiators seek to apply liberalizing measures, such as transparency and good governance in regulations as well as consistency of ownership across sectors, to a broad range of services. For example, negotiators would seek to eliminate any discrimination across a particular mode of delivery – like electronic commerce or rights of establishment – across a range of services, such as financial services and small package delivery.²⁴ This horizontal approach in negotiations is consistent with and formally extends the liberalization bias engendered by electronic commerce.

A final question of particular relevance for the developing countries is the *WTO work program on electronic commerce*. WTO members also need to decide how, or whether, to continue the WTO’s work program on electronic commerce. The different country positions on this issue mirror the debate over how to classify e-commerce trade. The EU asserts that because all electronic deliveries are services, the work program must proceed under the auspices of the Services Council. Before the Seattle Ministerial, the developing countries, were finding it difficult to staff all the meetings taking place in the various councils and thus preferred to have electronic commerce addressed only in the General Council. To promote the cross-cutting nature of electronic commerce, the US is proposing that a “non-negotiating working group” be set up in the WTO’s General Council. This proposal would satisfy the needs of the developing countries, but would not presuppose the outcome of the classification issue.

A future WTO work program on electronic commerce should have the following features: First, it should be reconstituted under the General Council rather than fragmented throughout the WTO. While input from the different councils and committees is important, the cross-cutting nature of electronic commerce means that leadership from the General Council is key. Moreover, close coordination of the work program under the General Council will help developing countries, which have smaller negotiating staffs, participate more fully.

Second, private sector participation has been the hallmark of all the regional trade forums’ discussions of electronic commerce (including those proceeding under APEC and FTAA). The private sector is leading the way in setting global technological standards for electronic commerce; it can also help resolve policymaking concerns such as tax administration

²³ Preparations for the 1999 Ministerial conference; communication from the United States, Further Negotiations As Mandated by the General Agreement on Trade in Services (GATS), as replicated in *Inside US Trade*, July 30, 1999.

²⁴ Susan Esserman, Testimony on “Approaching the New Round: American Goals in Services Trade” before the Senate Finance Subcommittee on Trade, October 21, 1999.

and privacy protection. Private sector participation and contribution to the WTO work program is therefore vital.

WTO members face an important watershed: to establish a predictable environment in which electronic commerce can thrive, allowing the benefits of this new form of international trade to be realized by all consumers in all countries. In accomplishing these objectives, the WTO can work to ensure that electronic commerce remains free from international trade barriers and continues to drive domestic and global growth.

HOW SHOULD DEVELOPING COUNTRIES APPROACH NEGOTIATIONS IN THE WTO?

The issues involved with electronic commerce are extremely complex, not only within a country but perhaps even more so between countries in the international arena. Leveraging human and administrative capital resources, both in negotiation and non-negotiating bodies is a must, both to keep up with e-commerce knowledge and to gain more traction in international negotiations. But the WTO negotiations obviously address more than just e-commerce; developing countries may be able to leverage their greater participation in e-commerce into greater openness in sectors of their traditional interest.

Many developing countries are already members of *regional groups*, such as APEC, FTAA, SADC (Southern Africa Development Community). Some of these groups have forums for private sector interaction, such as through the FTAA's Joint Private Sector Committee of Exports and APEC's Pacific Basin Economic Council. Such venues could increase the potential for public-private investment partnerships in key infrastructures. In addition, such interaction can help ensure that governmental initiatives are interoperable with the global private sector, as in standards setting for example.

WTO negotiations involve political as well as economic considerations and therefore, inevitably involve *trading-off of one sector for another*. Electronic commerce offers particular promise to developing countries. Market innovations and improved market efficiencies gained through electronic commerce and its prerequisite infrastructures will have the greatest impact in those sectors and countries where coordination and transactions costs are highest. By the same token, US businesses and workers, especially in the high-tech and service sectors, stand to benefit from the liberalization of electronic commerce and its infrastructures. Other countries also stand to benefit through the new opportunities created by electronic commerce, as well as through the increased efficiencies electronic commerce is making to traditional sectors. This is a clear win-win proposition for both the industrial and developing countries.

The overall benefits will be reduced, however, if markets are not open for the goods and services that developing countries will come to produce more efficiently than they do now. Developing countries, for example, face US barriers in textiles and apparel and some elements of data processing, communications and software programming, precisely those areas in which electronic commerce (and the related improvements in domestic infrastructures) can enhance the competitiveness of developing country producers. If US negotiators fail to acknowledge the need to lower these barriers, developing countries may limit their commitments to liberalize key areas of electronic commerce which would benefit the US and other industrial countries.

The choices are clear and the stakes are enormous. WTO members can establish a predictable environment in which electronic commerce can thrive, allowing the benefits of this new form of international trade to be realized by all consumers in all countries. Or not. In the US, where electronic commerce has its strongest hold, the information technology sector contributes to approximately eight percent of the economy. The remarkable growth in IT-related industries, especially those directly linked to electronic commerce, has helped to create the longest period of economic growth with low inflation in US history.²⁵ Such gains are available to all countries, not just first-users like the US and Europe; liberalization via electronic commerce is not a “zero-sum game.”

FINAL REMARKS

Electronic commerce and the internet integrate both services and goods sectors, across domestic and international boundaries. Key synergies exist between telecommunications, financial infrastructure, distribution and delivery, and governance. The internet and electronic commerce both depend on and facilitate liberalization in these areas. The WTO process can help prod domestic liberalization and open markets abroad. In addition, it can be a forum where developing countries use their existing regional relationships to convey information to the individual countries to raise knowledge levels and work with private sector partners. Electronic commerce and the internet represent the opportunity to leap forward to the next stage of economic development, where value is created not just by resource endowments or manufacturing might, but also by knowledge, information, and the use of technology.

²⁵ See the Department of Commerce’s “The Emerging Digital Economy II” (1999) at www.ecommerce.gov/ede for a comprehensive study of the impact of information technologies on the US economy. Chapter 6 of Mann, *Is the US Trade Deficit Sustainable?* discusses the role of IT in raising US productivity growth and the “new paradigm” of rapid macroeconomic growth with low inflation.