# 2009 ELECTRONIC COMMERCE INDUSTRY ASSESSMENT

## PART I:  BACKGROUND ON THE INDUSTRY

Today, e-commerce is a major economic force driving growth for developed as well as developing countries. The exponential growth of Internet use and online purchases globally combined with the relatively low cost of Internet marketing is enabling large companies as well as small and medium-sized enterprises (SMEs) to expand their market overseas through e-commerce.

There are several sub-categories of e-commerce:  business-to-consumer (B2C), business-to-business (B2B), government-to-consumer (G2C), government-to-business (G2B), and more recently consumer-to-consumer (C2C) activities.  G2C and G2B, or e-government, focuses on delivering citizen-centric services via the Internet that enable the population to file income tax returns, renew automobile registrations, submit a request for a passport, and access and comment on proposed regulations that could affect their lives.  For statistical purposes, the U.S. Census Bureau defines e-commerce as the value of goods and services sold online whether over open networks, such as the Internet, or over proprietary networks, such as electronic data interchange (EDI).  The Census Bureau defines B2C e-commerce as retail and service e-commerce and B2B e-commerce as manufacturing and wholesale e-commerce.

## PART II:  INDUSTRY OVERVIEW AND GLOBAL COMPETITIVENESS

### Measuring Global E-Commerce

The United States remains the largest global e-commerce market.  According to the U.S. Census Bureau, B2C online sales reached $251 billion in 2007, a 19 percent increase from 2006 (*See chart 1*).[1]  More recent data on retail e-commerce, which represented just over half of B2C transactions in 2007, shows quarterly declines in the second half of 2008 leading to a smaller annual increase of 4.3 percent for 2008.  Retail e-commerce resumed its upward trend in 2009, as the economy regained strength, reaching $35.9 billion in the 4th quarter and $134.9 billion for the year, a 4.5 percent quarterly increase and 2.0 percent annual increase.[2]  The top two retail merchandise categories for percentage of online sales in 2007 were music and videos, and electronics and appliances.[3]

As in years past, B2B activity accounted for the overwhelming majority of e-commerce in 2007, with a 93 percent share.  B2B transactions continued to occur primarily through proprietary EDI systems. Manufacturing shipments led all industry sectors, accounting for 56 percent of B2B e-commerce transactions, followed by wholesale trade, with 37 percent.[4]  B2C online sales, comprised of retail and service industry online sales, remain less common with 3.6 percent and 3.9 percent of total e-commerce sales respectively.[5]  Although these figures appear modest, it is important to note that the value of B2C shipments attributable to e-commerce grew by 19 percent between 2006 and 2007 and significantly outpaced overall retail sales growth during the economic downturn.[6]

While these statistics are an encouraging sign of the continued vitality of domestic e-commerce, a precise measurement remains elusive. To date, the Monthly Retail Trade Survey (MRTS) and four annual surveys are the primary sources of federal e-commerce estimates. However, since the MRTS relies on voluntary self-reporting and the annual surveys do not cover all entities conducting e-commerce, exact sales figures are difficult to determine. In addition, private sampling firms and government officials have yet to agree on metrics, methodology and definitions.[7]

These same issues have also hindered the development of internationally comparable statistics and statistics on the value and destination of cross-border sales. Despite these difficulties, most estimates point to clear growth. According to Eurostat, the European Union's (EU) statistical information service, the percent of individuals aged 16 to 74 in the EU27 that bought or ordered goods or services for private use rose to 37 percent in 2009[8] from 20 percent in 2004.[9] The United Kingdom had the highest percentage of online shoppers in 2009, with 66 percent of individuals aged 16 to 74 shopping online.[10] Unfortunately, information on the value of e-commerce is virtually non-existent in developing countries.

**Broadband Accessibility**

Broadband remains a key tool in e-commerce[11]. By enabling consumers and companies to interact more efficiently, broadband technology has the potential to markedly increase sales in every sub-category of e-commerce. As of 2008, the top ten broadband countries in terms of absolute subscribers were China, the United States, Japan, Germany, the United Kingdom, France, Korea, Italy, Canada, and Spain.[12] China surpassed the United States as the country with the highest number of broadband subscribers in 2008,[13] reaching 83.4 million subscribers.[14] Within the OECD, the Netherlands had the highest penetration rate with 38.1 per 100 inhabitants having broadband access in 2009, followed by the Denmark with 37 (*see Chart 2*).[15] As of June 2009, the number of broadband subscribers per 100 inhabitants in the U.S. was 26.7, ranking 15th among OECD nations.[16] These measurements may not be considered accurate by some countries, as there is disagreement on how to define broadband and what constitutes penetration/access.

The growth of mobile broadband subscriptions has dramatically increased in recent years, offering new opportunities for mobile e-commerce. According to the International Telecommunications Union, mobile broadband subscriptions eclipsed fixed broadband subscriptions in 2008. Asia and the Pacific and Europe have the greatest number of mobile broadband subscriptions, with Japan and the Republic of Korea accounting for 70 percent of mobile broadband subscriptions within the region. In Africa and Latin America, the number of fixed and mobile broadband subscribers is still relatively small, but growing.[17]

**WTO E-Commerce Classification**

The World Trade Organization (WTO) has not ruled whether e-commerce should be considered a good or a service. If considered a service, the General Agreement on Trade in Services (GATS) would dictate e-commerce trading rules. Under GATS, WTO members must provide market access only in those sectors where they have made affirmative and specific commitments.

Conversely, if e-commerce were considered a good, the General Agreement on Tariffs and Trade (GATT) would apply. GATT requires market access and national treatment for all WTO members.

During the December 2009 WTO Ministerial Conference, Ministers agreed to extend the temporary moratorium on e-commerce customs duties for all WTO members until the next Ministerial meeting in 2011. If the moratorium expires, this may once again become a contentious issue.

## PART III: INDUSTRY'S DOMESTIC ENVIRONMENT

### Domestic Regulatory Environment

Consumers must have trust and confidence in the online environment in order to ensure continued economic growth in the United States. Personal information is the key to virtually all business transactions and efforts to build trust and "e-confidence" will benefit consumers, industry, and government.

The U.S. Government has adopted a flexible approach to privacy protection that uses self-regulatory initiatives (including company codes of conduct, "seal programs" and alternative dispute resolution mechanisms), coupled with effective governmental enforcement of existing laws, to achieve meaningful privacy protection. Congress has recognized that in highly sensitive sectors, legislative solutions to protecting specific kinds of personal information may be required. Thus, it has enacted legislation to protect certain highly sensitive personal information, including children's information, medical records and financial data. Federal civil and criminal law enforcement authorities, including the Justice Department and the Federal Trade Commission (FTC), use their enforcement powers to protect personal information. During 2009, congressional committees and the FTC held public hearings to explore whether the current self-regulatory approach to personal data protection should be augmented in the future.

## PART IV: INDUSTRY'S TRADING ENVIRONMENT

### Bilateral Efforts Related to E-commerce

Data (including personal information) is an essential component of the digital economy, and it is critical to international trade that data flows freely across borders. Consumers must have trust and confidence in how information is transmitted and protected across borders to ensure continued economic growth in the United States. The United States is continuing its efforts in a variety of bilateral and multilateral fora to ensure that new barriers to e-commerce are not created.

*US-EU Safe Harbor Framework*

The Safe Harbor Framework is a bilateral agreement that allows U.S. companies to meet the requirements of the European Union's (EU) Directive on Data Privacy. This is critical because it facilitates uninterrupted transfers of personal information that support billions of dollars in trade

from the EU to the United States.  More than 2,100 U.S. companies have self-certified to the U.S.–EU Safe Harbor Framework.  This figure includes organizations whose self-certification status is incomplete.  The United States and the EU continue to consult regularly regarding the operation of the Safe Harbor Program.

In November 2009, ITA sponsored the 2009 Conference on Cross Border Data Flows, Data Protection and Privacy in Washington, D.C.  The European Commission and the Article 29 Working Party on Data Protection participated in the event and were represented on a number of panel discussions during the 2-day conference.  The Safe Harbor Conference in Washington served as a basis for transparent and candid discussions on recent developments in the Safe Harbor Framework and in EU data protection practices, global privacy standards, social network service providers' personal data use and retention, behavioral advertising practices, and data protection in pre-trial e-discovery.  At this juncture, it is unclear whether the next conference, which normally would be organized by the European Commission in Brussels, Belgium, will take place.

*U.S.–Switzerland Safe Harbor Framework*

On February 16, 2009, the United States and the Government of Switzerland completed negotiations to establish the U.S.–Swiss Safe Harbor Framework.  Deliberations began in March 2008 and concluded in January 2009 with an exchange of letters between the U.S. Departments of Commerce and Transportation, the Federal Trade Commission and the Swiss Government's Federal Data Protection and Information Commission.  This agreement is expected to facilitate cross border data flows for many U.S. multinational companies.  As of January 2010, more than 460 U.S. companies have self-certified to the U.S.-Switzerland Safe Harbor Framework.

*U.S.–Japan Information Technology Working Group (ITWG)*

The U.S.–Japan Information Technology Working Group (ITWG), under the Regulatory Reform and Competition Policy Initiative (Regulatory Reform Initiative), aims to improve the environment for growth and investment in IT and e-commerce in Japan by identifying and removing regulatory barriers that may hinder information technology (IT) and e-commerce. Having last met in June 2009, the structure and timing of the next round of ITWG talks remain to be decided as the respective new administrations continue to evaluate the arrangement.

Although Japan's IT and e-commerce markets are among the largest in the world, their tremendous potential for growth (and market opportunities for U.S. firms) remains unfulfilled because of regulatory and non-regulatory barriers.  While Japan has taken significant steps in recent years toward establishing an environment that promotes the use of IT, the Internet, and e-commerce, the Government of Japan (GOJ) tends to take a regulatory, non-market-led approach to the development of these sectors, and to enact policies that can favor Japanese IT suppliers and disadvantage foreign firms.

The United States Government (USG) uses the ITWG to bring to the attention of the GOJ issues of concern to U.S. companies operating or desiring to operate in Japan and to identify ways to address these concerns.  The USG also encourages the GOJ's acceptance of general principles in

its IT and e-commerce-related policies that are key to IT and e-commerce expansion, such as private sector leadership, self-regulation, input in the policy planning process, and technology neutrality.

Following an exchange of detailed recommendations in October 2008, both governments engaged in work under the auspices of four working groups, including the ITWG, as well as the High Level Officials meeting process. The progress achieved through this work was outlined in the 2009 Report to the Leaders. Among the steps Japan has taken or will take that respond to the USG's recommendations is the creation of new opportunities for certain electronic fund transfer providers by introducing the legal framework necessary to offer such services in Japan. These legal reforms provide access to a $20 billion market opportunity

*India*

The United States is working with partners in numerous fora, including the U.S.–India Information and Communications Technology (ICT) Working Group, the Commercial Dialogue, and the Trade Policy Forum to address ICT and e-commerce issues with India. India's Information Technology Act of 2000 (IT Act) put in place an important set of regulations that were created to give legal recognition to electronic transactions and to regulate the various aspects of e-commerce including digital signatures, data privacy, cybersecurity, and penalties (both civil and criminal). Additional amendments to the IT Act were passed in late 2008 and received the assent of the President of India on February 5, 2009. The Information Technology (Amendment) Act 2008 includes provisions that deal with new forms of cyber crimes, such as identity theft, deliberate leakage of data, and e-commerce fraud. The Amendments should serve to enhance India's data privacy framework. Going forward, the United States will engage the GOI on a range of issues, including U.S. industry's concern about the Amendment's treatment of Internet service provider liability in cyber crime and security issues.

*Free Trade Agreements (FTAs)*

The United States has negotiated several bilateral and regional free trade agreements (FTAs) that feature electronic commerce chapters. The frameworks established in these chapters allow for the free flow of information and removes tariffs from cross-border digital trade between the parties. One of the underlying themes for these chapters is the position that any domestic regulatory practice must be technology neutral, i.e., no specific technology may be chosen for any Internet transaction. The Korea and Colombia agreements were concluded in 2007 and await congressional action. Like the bilateral agreements with Chile and Singapore, the Central American Free Trade– Dominican Republic Agreement (CAFTA-DR) and the Peru agreement, which entered into force on January 1 and February 1, 2009 respectively, include legally binding chapters on electronic commerce that address and liberalize cross-border digital trade. CAFTA-DR signatories include the United States, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua.

**Multilateral Efforts Related to E-commerce**

The United States has also taken an active role in various multilateral fora to encourage the continued growth of e-commerce.

*APEC Privacy Framework*

Since the adoption of the APEC Privacy Framework in November 2004, the APEC member economies, through the APEC Data Privacy Subgroup, have been working with interested stakeholders to develop an implementation plan for a system of cross-border rules for the transfer of personal data throughout the APEC region (commonly referred to as "cross-border privacy rules"). These cross-border rules would be self-regulatory in nature and would give businesses a way to comply with diverse regulatory requirements using uniform rules.

As a step toward the creation of an APEC-wide system of cross-border rules, the APEC economies approved the launch of an official "Privacy Pathfinder" project in 2007. ("Pathfinder" is an APEC term for a test pilot.) The goal of the Privacy Pathfinder is to develop the necessary documents and processes to allow cross-border privacy rules to be tested before the system goes live. The work is proceeding through various projects, which include:

- development of the self-assessment forms and program requirements for business;
- development of the requirements for participating trustmarks and other accountability agents;
- development of the enforcement cooperation framework between the enforcement authorities in participating APEC economies, as well as a directory of privacy officials and a complaint handling form; and
- a "pilot" in which the effectiveness of the documents developed in the other projects will be tested and the documents updated as appropriate.

In 2009, APEC member economies completed the pilot and issued an outcomes report outlining next steps. In addition, the APEC Enforcement Cooperation Arrangement was formally endorsed by Ministers. The primary goal for 2010 is to finalize the remaining necessary documentation for endorsement by Ministers and to secure member economy subscription to the APEC Enforcement Cooperation Arrangement.

*Organization for Economic Cooperation and Development (OECD)*

The United States continues its leadership on digital economy policy in the Working Party on Information Security and Privacy (WPISP) of the OECD. The group is in the second year of the Global Privacy Dialogue, and is preparing a number of events to evaluate the effect of the 1980 OECD Privacy Guidelines on privacy regimes around the world. Current projects include: identifying issues surrounding cross-border enforcement of privacy laws that will lead to an instrument to facilitate cooperation; investigating the economic value of protecting personal privacy online; protecting children online; and studying how member countries develop, implement and share critical information infrastructure policies.

WPISP will finalize a global privacy report in 2010, in part to celebrate the 30th anniversary of the 1980 OECD Privacy Guidelines, but also to consider new opportunities for further work on protecting personal information. In the build-up to issuing the Global Privacy Report, the WPISP will hold roundtables and conferences in March, October, and December. Furthermore, the OECD will commission several background papers on different dimensions of the economics of privacy.

*Trilateral Committee on Transborder Data Flows*

The Trilateral Committee on Transborder Data Flows was established in 2008 to further the goals of the Security and Prosperity Partnership (SPP). In April 2008, the Statement on the Free Flow of Information (Statement) was signed by representatives from Canada, Mexico and the United States. The Statement affirms that sustained economic growth is dependent on a "transparent legal, policy and regulatory environment that permits the free flow of information across borders and facilitates its use for the conduct of trade and commerce."

In furtherance of these goals, the signatory countries established the Trilateral Committee on Transborder Data Flows (Committee). The Committee is composed of government representatives from Canada, Mexico and the United States and has been working in consultation with the business communities, civil and law societies, and academia in each country to identify and address impediments to electronic information flows across borders that affect economic growth. The Committee held its inaugural meeting in Washington, DC in September 2008 and held subsequent meetings and stakeholders' forums in Mexico and Canada in February and April of 2009. Committee representatives met in Washington, DC in December 2009 to discuss the work plan for 2010. In 2010, the Committee finalized its report[18] on the findings of its business consultation sessions and conduct outreach in all three countries to improve the business community's understanding of regulations governing data privacy and transborder data flows in order to reduce impediments to trade.

**Challenges Ahead**

While continued growth in all sub-categories of e-commerce seems assured, impediments continue to arise. Possible impediments include the rise of differing data privacy regimes in other countries, identity management, data breaches, and security. The Department of Commerce continues to work with other agencies and the private sector to build consumer confidence and trust in the Internet.

*Development of Data Privacy Regimes in Foreign Countries*

A number of foreign countries—including China, Vietnam, Korea, Malaysia, the Philippines, Mexico and Uruguay—are in the process of developing and implementing data privacy legislation or regulation that could impact U.S. companies. Several of these countries have taken very different approaches to the protection of personal information. The implementation of different approaches to privacy protection has the potential to negatively impact cross-border electronic trade. ITA continues to work to promote an international environment that facilitates the growth of e-commerce that ultimately helps U.S. companies to increase exports. ITA

actively promotes compatible approaches to privacy protection in a number of its bilateral initiatives through the U.S.–Japan Information Technology Working Group, the U.S.-India High Technology Cooperation Group, and other bilateral fora.

*International Standards*

In addition to the legislative and regulatory efforts under consideration by foreign governments, the International Organization for Standardization (ISO) is developing "Privacy Framework" and "Privacy Architecture" standards. Moreover, ISO's Privacy Steering Group is considering new work programs that would address data privacy issues and help drive public policy. ITA participates in the Technical Advisory Group (TAG) for cyber security, collaborating with the National Institute of Standards and Technology (NIST) and U.S. industry to help draft privacy standards that represent the interests of U.S. stakeholders. Furthermore, ITA staff chair the U.S. TAG for the ISO Privacy Steering Group.

*Consumer Confidence Building and Trust in the Internet*

Diminished consumer confidence due to the growing proliferation of identity theft, spoofing, and phishing, is another challenge to the growth of e-commerce. The U.S. approach to building consumer confidence relies on a combination of government and industry self-regulation practices, such as alternate dispute resolution (ADR), codes of conduct, and trustmark programs. The OECD's Committee on Consumer Policy (CCP) is currently reviewing the 1999 *Guidelines for Consumer Protection in the Context of E-Commerce* to determine how they might need to be adapted to increase consumer trust in the Internet economy. To support that review, the OECD organized a three day conference in December 2009 entitled, *Empowering E-Consumers: Strengthening Consumer Protection in the Internet Economy* at which the Secretary of Commerce was a keynote speaker.

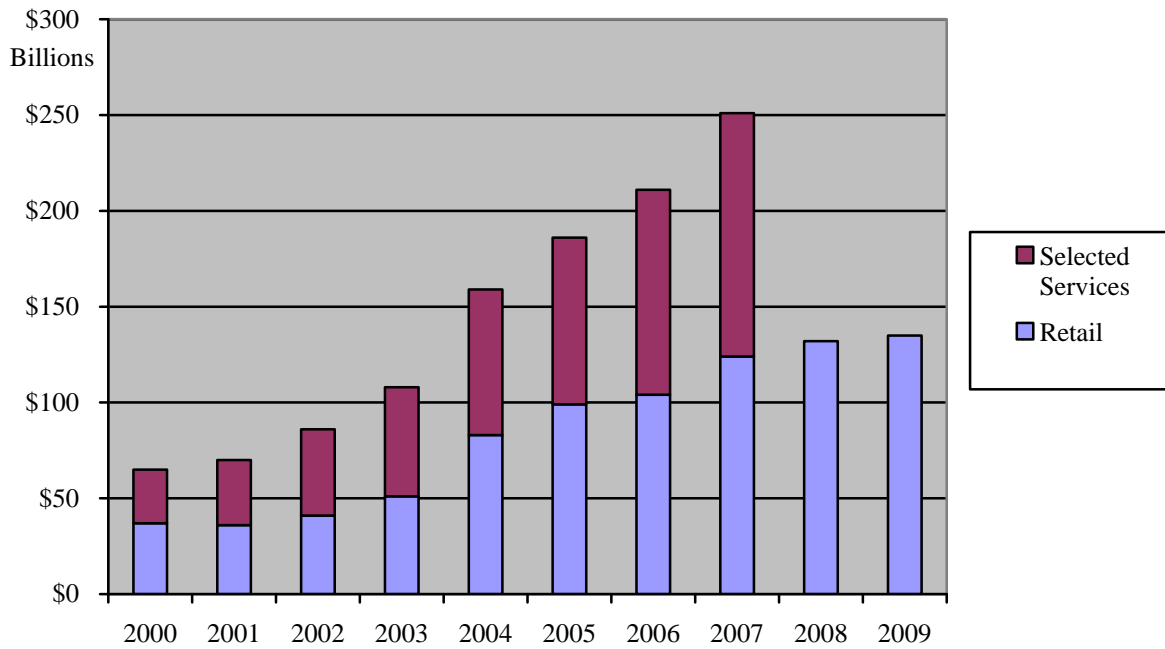*Department of Commerce's Internet Policy Task Force*

In April 2010, the Department of Commerce created an Internet Policy Task Force to identify leading public policy and operational challenges in the Internet environment. The Task Force leverages expertise across many bureaus at the Department, including those responsible for domestic and international information and communications technology policy, international trade, cybersecurity standards and best practices, intellectual property, and export control. The Department of Commerce's Internet Policy Task Force is conducting a comprehensive review of the nexus between privacy policy and innovation in the Internet economy. The Task Force is also conducting reviews of cyber security, online copyright protection, international barriers to moving data around the globe, and the ability of entrepreneurs and small and medium sized businesses to expand their operations via the Internet. The Task Force may explore additional areas in the future. On April 23, the Department of Commerce released a notice of inquiry seeking comment on the impact of current privacy laws in the United States and around the world on the pace of innovation in the information economy. Comments on the NOI were due on June 14, 2010. After analyzing the comments received, the Department intends to issue a report, which will contribute to the Administration's domestic policy and international engagement in the area of Internet privacy.

*Cybersecurity*

Whenever two or more computers are connected to a network, the risk of a breach in the security of the networked computers' hardware, software, stored data, and peripherals becomes a much more significant issue, and this increased level of threat naturally extends to everything that shares the network. Today's networks do not just include computers they also, for example, may include links to environmental controls, physical plant security, and appliances.  Thus, improving cybersecurity is critical for all industries, and particularly for e-commerce.

The Obama administration has made cybersecurity a top priority, as evidenced by the comprehensive Cybersecurity Policy Review requested by President Obama early in 2009.[19]  To achieve the goals established by Cybersecurity Policy Review, the White House created the Information and Communications Infrastructure Interagency Policy Committee (ICI-IPC). ITA participates in the ICI-IPC and its subcommittees and working groups directly, and through the Department of Commerce's Cyberspace Integrity Management Office. ITA is pursuing the following goals, in close cooperation with other department of Commerce bureaux.

**U.S. B2C E-Commerce Sales 2000-2009**
**(Chart 1)**



Source: U.S. Census Bureau, E-Stats

## BROADBAND SUBSCRIBERS PER 100 INHABITANTS, June 2009
### (Chart 2)

| Rank | | DSL | Cable | Fibre/LAN | Other | Total | Total subscribers |
|---|---|---|---|---|---|---|---|
| 1 | Netherlands | 22.5 | 13.7 | 1.1 | 0.8 | 38.1 | 6 262 500 |
| 2 | Denmark | 22.4 | 9.9 | 3.9 | 0.9 | 37.0 | 2 031 000 |
| 3 | Norway | 22.7 | 7.7 | 3.5 | 0.7 | 34.5 | 1 645 619 |
| 4 | Switzerland | 23.3 | 10.0 | 0.2 | 0.3 | 33.8 | 2 603 400 |
| 5 | Korea | 7.2 | 10.5 | 15.1 | 0.0 | 32.8 | 15 938 529 |
| 6 | Iceland | 30.7 | 0.0 | 1.3 | 0.7 | 32.8 | 104 604 |
| 7 | Sweden | 18.5 | 6.3 | 6.7 | 0.1 | 31.6 | 2 915 000 |
| 8 | Luxembourg | 26.0 | 5.3 | 0.0 | 0.0 | 31.3 | 153 172 |
| 9 | Finland | 24.9 | 4.1 | 0.0 | 0.8 | 29.7 | 1 579 600 |
| 10 | Canada | 13.2 | 15.2 | 0.0 | 1.3 | 29.7 | 9 916 217 |
| 11 | Germany | 26.7 | 2.4 | 0.1 | 0.1 | 29.3 | 24 043 000 |
| 12 | France | 27.5 | 1.6 | 0.1 | 0.0 | 29.1 | 18 675 000 |
| 13 | United Kingdom | 22.8 | 6.1 | 0.0 | 0.1 | 28.9 | 17 742 676 |
| 14 | Belgium | 16.3 | 11.8 | 0.0 | 0.2 | 28.4 | 3 041 311 |
| 15 | United States | 10.3 | 13.8 | 1.6 | 0.9 | 26.7 | 81 170 428 |
| 16 | Australia | 19.4 | 4.3 | 0.0 | 1.2 | 24.9 | 5 356 000 |
| 17 | Japan | 8.5 | 3.3 | 12.4 | 0.0 | 24.2 | 30 927 003 |
| 18 | New Zealand | 20.4 | 1.4 | 0.0 | 1.0 | 22.8 | 980 649 |
| 19 | Austria | 14.5 | 6.8 | 0.1 | 0.5 | 21.8 | 1 821 000 |
| 20 | Ireland | 15.5 | 2.8 | 0.1 | 3.0 | 21.4 | 950 082 |
| 21 | Spain | 16.6 | 4.0 | 0.1 | 0.2 | 20.8 | 9 477 901 |
| 22 | Italy | 19.2 | 0.0 | 0.5 | 0.1 | 19.8 | 11 878 000 |
| 23 | Czech Republic | 7.0 | 3.9 | 0.9 | 6.3 | 18.1 | 1 891 958 |
| 24 | Portugal | 10.0 | 6.7 | 0.1 | 0.2 | 17.0 | 1 809 354 |
| 25 | Greece | 17.0 | 0.0 | 0.0 | 0.0 | 17.0 | 1 908 000 |
| 26 | Hungary | 8.2 | 7.6 | 1.0 | 0.0 | 16.8 | 1 688 414 |
| 27 | Slovak Republic | 6.6 | 1.3 | 2.7 | 2.0 | 12.6 | 680 351 |
| 28 | Poland | 7.4 | 3.7 | 0.1 | 0.1 | 11.3 | 4 307 992 |
| 29 | Turkey | 8.5 | 0.1 | 0.0 | 0.0 | 8.7 | 6 188 676 |
| 30 | Mexico | 6.3 | 1.9 | 0.0 | 0.2 | 8.4 | 8 959 426 |
| Total | OECD | 13.7 | 6.6 | 2.1 | 0.5 | 22.8 | 271 134 392 |

Source: OECD, Broadband Portal, 2009

[1] U.S. Census Bureau. "E-Stats," 28 May 2009, < http://www.census.gov/econ/estats/>

[2] U.S. Census Bureau. "Quarterly Retail E-Commerce Sales: 4th Quarter 2009," 16 Feb. 2010, <http://www.census.gov/retail>.

[3] U.S. Census Bureau. "E-Stats," 28 May 2009, < http://www.census.gov/econ/estats/>.

[4] Idem.

[5] Idem.

[6] U.S. Census Bureau. "Quarterly Retail E-Commerce Sales: 3rd Quarter 2009," 18 Nov. 2009, <http://www.census.gov/retail>.

[7] Organisation for Economic Co-operation and Development. "ICT Use by Businesses: Revised OECD Model Survey," Working Party on Indicators for the Information Society, 24 Jan 2006.

[8] Anna Lööf and Heidi Seybert. "Internet usage in 2009 - Households and Individuals," Eurostat, European Commission, 8 Dec. 2009, <http://epp.eurostat.ec.europa.eu/>.

[9] European Commission. "Nearly one third of individuals in the EU27 shopped on the internet in 2008," Eurostat News Release, 27 Mar 2009, <http://epp.eurostat.ec.europa.eu/>.

[10] Anna Lööf and Heidi Seybert. "Internet usage in 2009 - Households and Individuals," Eurostat, European Commission, 8 Dec. 2009, <http://epp.eurostat.ec.europa.eu/>.

[11] See FCC's National Broadband Plan at http://www.broadband.gov/

[12] Grant Eskelsen, Adam Marcus, W. Kenneth Ferree, Kate Schumacher, and Alex Liopiros. *The Digital Economy Factbook*, 10th ed., Progress and Freedom Foundation, 2009.

[13] International Telecommunications Union. "The World in 2009: ICT Facts and Figures," 2009.

[14] International Telecommunications Union. "Internet Indicators, Subscribers, Users, and Broadband Subscribers," accessed 12 Jan 2010, <http://www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx>.

[15] Organisation for Economic Co-operation and Development. "Broadband Subscribers Per 100 Inhabitants," Jun 2009, accessed at OECD Broadband Portal, 12 Jan 2010, <www.oecd.org/sti/ict/broadband>.

[16] Idem.

[17] International Telecommunications Union. "The World in 2009: ICT Facts and Figures," 2009.

[18] See the report at Export.gov/infotech

[19] Office of the White House, Cyberspace Policy Review   26 May, 2009, <http://www.whitehouse.gov/assets/documents/Cyberspace_Policy_Review_final.pdf>