Fast Facts

ICT

INFORMATION AND COMMUNICATION TECHNOLOGY

OVERVIEW

Information and communication technology (ICT) refers to the collection of products and services that turns data into useful information and functions. With the convergence of formerly disparate technologies, distinctions between "information technology" and "telecommunications" have become blurred. Take, for example, the new Smartphones that incorporate phones, cameras, computer operating systems, internet browsers, video production, GPS, calculators, music files, and video games.

Some facts to consider:

- Total Internet usage is now over 1.6 billion users worldwide. China recently topped the chart with 338 million users, followed by the U.S. with 220 million, Japan with 94 million, and India at 81 million.
- E-commerce has grown rapidly in recent years, with manufacturers and merchant wholesalers relying heavily on business-to-business sales. U.S.-based manufacturers used e-commerce to ship over $1.86 trillion in goods in 2007.
- The U.S. is the world's leader in terms of ICT-related patents, with roughly 35% of the world's ICT patents, followed by Japan (18%) and Germany (8%). The ratio of ICT patents to overall patents is growing along with cross-border ownership involving joint venture companies from different countries.
- Industrial policies that promote exports of high technology products can be effective way to increase standards of living. Many countries have had success using this strategy, including the Philippines, Hong Kong, Malta, Singapore, Taiwan, Malaysia, Ireland, Korea, China, and Costa Rica.
- Many of today's manufactured products require hi-tech components that cross several national borders before being installed in the final product, which can make it difficult to determine the country of origin. These complicated supply chains greatly increase interdependence among nations to produce new, cheaper ICT products for the global market.

WORLDWIDE ICT SPENDING

Global ICT revenues exceeded $3.7 trillion in 2008 and should surpass $4 trillion by 2011, despite the current global economic slump. Communications technology spending hit $1.9 trillion last year, and commands 57% of worldwide ICT spending. IT services, the 2nd largest category at $805.9 billion, is an area where the U.S. has a trade surplus. Computer hardware spending grew 2.5% in 2008 to $379.5 billion, and software sales reached $221.9 billion worldwide, growing an annual 10.3%. Negative growth is anticipated for all categories in 2009.

Worldwide ICT Spending Forecast (Billions of U.S. Dollars)

	2008	2009	2010
Computing Hardware	$ 379.50	$ 317.80	$ 317.70
Annual Growth (+/-)	2.5 %	-1.6 %	0.0 %
Software	$ 221.90	$ 218.30	$ 225.30
Annual Growth (+/-)	10.3 %	-1.6 %	3.2 %
IT Services	$ 805.90	$ 761.00	$ 784.00
Annual Growth (+/-)	8.2 %	-5.6 %	3.0 %
Telecom	$ 1,945.20	$ 1,855.90	$ 1,898.70
Annual Growth (+/-)	5.7 %	-4.6 %	2.3 %
All ITC Categories	**$ 3,352.50**	**$ 3,152.90**	**$ 3,225.70**
Annual Growth (+/-)	**6.2 %**	**-6.0 %**	**2.3 %**

(Source: Gartner)

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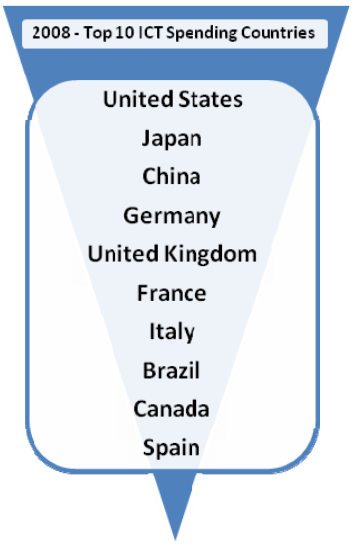

ICT Trends in Specific Countries

In most countries, ICT spending is normally dominated by government, then business, with consumers contributing about one-third. With the global recession, government spending on e-services, infrastructure, and education is more important than ever because the private sector tends to reduce ICT spending in economic downturns.

The **United States** is by far the largest spender on ICT, and is the largest importer of computers and peripherals (mostly from Asia). Approximately 10 million U.S. workers earn their living from information technology jobs. Of those 10 million, the ICT services industry accounts for roughly 1.6 million workers and 127 thousand establishments. Although the United States excels in hi-tech products and services, ICT imports outstripped exports nearly 4 to 1 in 2008 *(Imports = $97.5 billion, Exports = $27 billion)*. Major U.S. export destinations were, in order: Mexico, Canada, Netherlands, United Kingdom, China, Singapore, Germany, Japan, and Brazil.

Europe is anticipating a slight recovery in 2010 after a decline in ICT spending which amounted to €717 billion in 2009 overall. The forecast for each segment in 2009 is: Communications €362 billion, Software & Services €210.4 billion, Hardware €85.7 billion, and Consumer Electronics €58.5 billion. The United Kingdom is the largest market with €70 billion followed by Germany. Denmark and Sweden are ranked as the top "network ready" nations worldwide, with Finland, Iceland, and Norway also in the Top Ten.

China spent $327 billion in 2008, jumping ahead two rankings. Spending is predicted to maintain a 10% increase through 2011.

Brazil is the largest IT market in Latin America with spending predicted to be $30 billion by 2011, increasing to $37 billion by 2013.

Mexico will rapidly juice its IT sector spending $12.5 billion in 2008 to $20 billion in 2013. Spending is expected to consist mainly of: Computer Sales $7.6 billion, Services $7.3 billion, and Software $1.3 billion. Broadband subscription will surpass 12 million people by 2013.

Australia is very tech-savvy as the 12th largest ICT market globally with $123 billion in 2008 and about 388,000 employees nationwide.

India spent $13.7 billion on ICT in 2008 and will expand to $24.6 billion by 2013, confirming a commitment to connect the rural areas. Unfortunately, less than 2% of Indians own a PC.

Singapore's domestic IT market was $4.8 billion in 2008, possibly $6.9 billion by 2013. The nation ranks very high in every category in a 2008-09 report on network readiness.

The **Middle East** is considered the region to have benefited the most from ICT enhancements. **Saudi Arabia** will spend $185.7 million in 2009 on ICT and a total of $733 million through 2011. **Oman** will spend $56.6 million and **Qatar** $174.3 million through 2011 on ICT goods and services.

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2008—Virginia Exports of ICT Hardware			
HTS	Commodity	U.S.$	Change 2007-08
85	**All Electrical Machinery**	$ 3,255,948,294	-4.4%
8542	Integrated Circuits	$ 2,125,360,254	-9.0%
8517	Line Telephon/Etc El Appar	$ 178,677,591	-7.7%
8504	ADP Power Supplies; Part	$ 92,256,295	55.4%
8525	Trns App F R-Tel;TV Cm	$ 91,452,189	77.5%
8544	Insulated Cable/Wire/Etc	$ 88,935,573	2.7%
8501	Elec Motor+Generators	$ 88,614,387	78.2%
8529	TV/Radio/Radar App Parts	$ 83,615,993	-0.8%
8537	Board/Print Elec w/Switch	$ 74,408,292	7.6%
8538	Elec App Parts (8535-7)	$ 64,599,429	n/a
8536	Elec App F Swch=<1000V	$ 61,412,972	18.5%
8519	Turntable/Rec+Cass Player	$ 25,931,664	-2.1%
8511	Igni/Etc Equip;Generator	$ 25,658,561	-46.3%
8546	Elec Insulator All Material	$ 25,239,141	14.4%
8523	Unrecorded Media/N Film	$ 24,340,757	-27.2%
8534	Printed Circuits	$ 24,039,653	13.8%
8540	Therm/Cold/Photo Cat Tube	$ 22,610,660	14.4%
8526	Radar/Radio Nav Aid Appa	$ 18,243,251	-58.3%
8543	Other Elec Mach/Etc;Parts	$ 17,259,835	-9.7%
8541	Semicon Dev; L-Emit Diode	$ 15,806,340	54.5%
8539	Elec Fila/Discharge Lamp	$ 12,530,949	-64.1%
8527	Radiobroadcast Recvers	$ 11,253,064	101.7%
8531	Sound/Visu Signal Apparat	$ 11,173,259	53.1%
8503	Elec Motor/Generator Parts	$ 9,258,075	-24.3%
8518	Sound-Generating Equipt	$ 7,383,061	67.9%
8502	Elec Generator Set/Rot Cv	$ 6,531,866	281.1%

VIRGINIA ICT EXPORTS

With Virginia's proximity to the nation's capital, there are many firms in the ICT field—especially software and services—taking advantage of government sales. In fact, Virginia led the nation in 2008 with a concentration 92 of 1000 private-sector workers in high-tech jobs. Exports of manufactured ICT products, particularly integrated circuits which are vital components of foreign exports, are also strong as detailed in the chart to the left. Overall volume is down 4.4% from 2007, but that is mainly due to the top two commodities which grew rapidly and may have been for projects of limited duration.

VIRGINIA ICT EXPORTS
TOP 10 DESTINATIONS

1. Portugal
2. Taiwan
3. Singapore
4. China
5. Canada
6. Germany
7. U.K.
8. Mexico
9. Japan
10. Korea

EXPORT CONTROLS AND INTELLECTUAL PROPERTY CONCERNS

The United States is a leader in designing and marketing the world's most cutting-edge ICT products, and there are critical measures that American companies need implement in or to protect their competitive position. Not only is it smart business to restrict access to your proprietary knowledge, but it could also be illegal to share it with foreign nationals (actual or deemed exports). Currently, American information technology firms are prevented from selling their most advanced encryption products in foreign markets.

See VEDP Fast Facts "Export Licensing, Regulations, and Compliance"

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VEDP SERVICES

The VEDP offers a number of export-related services to Virginia businesses, including group market visits and market research by our Global Network of in-country consultants.
These services are available to all Virginia exporters.
For more information, please visit our website: www.exportvirginia.org

ADDITIONAL RESOURCES

- International Trade Administration. U.S. Department of Commerce: www.trade.gov
- Information Technology Association of America: http://www.itaa.org
- Organization for Economic Co-operation and Development—ICT: http://www.oecd.org
- United States International Trade Commission: www.usitc.gov
- World Information Technology and Services Alliance: http://www.witsa.org/
- World Bank- Global ITC: www.WorldBank.org

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