



Progressive
Economy

Testimony: The Era of Digital Trade

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Thank you very much for this opportunity to testify before the Commission. By way of background, I direct the ProgressiveEconomy program at the GlobalWorks Foundation, a non-partisan 501(c)(3) organization here in Washington, D.C., dedicated to promoting widely shared global opportunity, prosperity, peace, and security. ProgressiveEconomy is a research project meant to deepen understanding of U.S. trade policy and the global economy.

In its investigation of the digital economy and its implications for trade, the Commission is taking up an exceptionally important topic – one as consequential, I think, as the invention of container shipping in the 1950s, or the launch of the GATT negotiations in the 1940s. The investigation takes up three very interesting and important questions:

- How significant is digital trade today?
- What challenges should U.S. policy address as digital trade develops?
- Do our trade data enable Congress and future administrations to make informed choices about policy, and informed judgments on its results?

To paraphrase a bit, what do we know? What should we do? And what more should we know?

WHAT DO WE KNOW?

1. Trends in Internet Use and Production

What do we know? To begin with, we know a good deal about trends in use of the Internet, and something about its contribution to the national economy.

It is just 65 years since the first computer went live in 1947, 43 since the first connection



between computers at UCLA in 1969, and 24 years since the launch of the first web-site. It still less than 20 years since the launch of the World Wide Web in Switzerland in April of 1993; and it is just a decade since fiber-optic submarine cables replaced the post-World War II copper cable network, facilitating large-scale, low-cost transfer of data around the world.

As these milestones have passed, the digital world has grown. The website *Internet World Stats*, which tracks internet use by country, reports that in 2001 there were 140 million internet users in the U.S., roughly a third of the 450 million people with Internet access worldwide. A decade later, Internet access in the U.S. is 80 percent and use has nearly doubled, but American users are only 10 percent of the 2.4 billion Internet users worldwide.¹ In economic terms, meanwhile, McKinsey's 2011 report *Internet Matters* estimated that the Internet accounted for 15 percent of all U.S. growth between 2004 and 2009, and that Internet firms produced 3.8 percent of America's GDP – that is, the equivalent of \$600 billion in economic output.²

These facts are enough to give us some confidence that digital trade is already significant, and will likely grow more so very quickly. But we cannot actually be sure about this – because paradoxically, we have little data about data flows. No government agency or international organization produces regular, or even occasional, statistics on the level of Internet-based trade, the types of services and digital products most frequently traded, the varieties of firms using the Internet, or the trends in the scale of information flows.

2. Estimating Digital Trade

We can, however make some educated guesses. ProgressiveEconomy examined this topic last year for a paper entitled *Lines of Light* (available at <http://progressive-economy.org/lines-of-light-data-flows-as-a-trade-policy-concept/>), and used three data 'surrogates' to provide at least a credible picture of trade over the Internet:

(a) The Bureau of Economic Analysis' annual services-trade reports provide data on imports and exports of industries especially well suited to export via the internet. We defined these, not very precisely but (I believe) reasonably, as including financial services, insurance, telecommunications, and professional and business services (which includes such industries as data processing, advertising, architecture and engineering, entertainment, and scientific research, development, and testing), and tabulated their exports from 1990 onward.

Together these industries accounted for about \$15 billion in exports as of 1990, three years before the launch of the World Wide Web. This was 2.8 percent of \$535 billion in total exports of goods and services. They reached \$82 billion and 7.6 percent of exports in 2000, and as of 2011 were \$240 billion and approaching 12 percent of exports.³ Thus we can say at least that

services industries especially well-suited to digital trade have, for the past two decades, produced export growth well above the rates for other industries.

(b) The Census Bureau's annual electronic commerce reports detail use of electronic commerce for shipments by manufacturing, retailing, and other industries. These show very rapid rates of adoption of e-commerce especially for manufacturers. In 2001, manufacturers used e-commerce for 18 percent of their shipments. In 2005 the figure was 28 percent; in 2009 42 percent; and in 2010, the most recent year available, 46 percent.⁴ These reports do not distinguish between domestic shipments and exports, but it would at least be logical to assume that exporters rely especially heavily on electronic commerce.

(c) The ITC itself and some firms provide at least some figures on "micro-exports" of very small quantities of goods— that is, exports likely to be from very small firms, often of products tailored for a single buyer, and perhaps especially likely to be arranged through the Internet. The ITC's Dataweb offers one option, which is to look at products in HTS-4 lines 9809 and 9889. Here the figure are equivocal, showing large increases from 2005 to 2010 but then a decline in 2011, and relatively modest growth in 2012.⁵ Another option is to use reports from individual Internet firms. One of these, eBay, finds that in 2010, about 20 percent of its \$20 billion in gross sales were in exports from the United States, meaning about \$4 billion worth of exported goods.

Together, these surrogates appear to confirm the impression one draws from daily life: the Internet has become a major vehicle for trade. While again noting that we do not have authoritative data, digital trade may now account for more than a tenth of American exports – which by way of context would compare to about 16 percent for manufactured goods and agriculture carried in maritime shipping containers, and 30 percent for goods carried by air.⁶

3. The U.S. in Relation to Other Countries

Finally, we can guess with some confidence – though again we cannot be absolutely sure – that the United States is the world leader in digital trade. The World Trade Organization's annual reports on trade statistics find the United States to be an especially successful exporter of commercial services, accounting for \$581 billion of \$4.2 trillion in global services exports (including intra-European Union trade) in 2011.⁷ This total was more than 2nd-ranked Germany and 3rd-place Britain combined, with an especially strong export performance – 16 percent of the global total⁸ – in exports of commercial services excluding transport and travel.

Altogether, then, in a world in which technological change is constantly making trade over the Internet cheaper and easier, the figures we have this suggests that the digital economy gives America a large opportunity for growth and job creation in the years ahead – that is, assuming the Internet continues to develop as a pathway for trade.

WHAT SHOULD WE DO?

What then are the challenges to policy – or, put another way, what should we do? Perhaps we can list three areas of concern for policy:

First, agreements and rules for trade over the Internet are weak. Goods trade is covered by an intricate set of WTO agreements created in 9 international agreements since 1947, which treat tariff rates, quotas, administration of customs, inspection policies, subsidies, rules of origin, justifications for blocking imports, and other topics in great detail. These are deepened and amplified by 20 FTA relationships negotiated since 1985.

The WTO's services trade agreements by contrast are simple and general, covering only telecommunications and financial services in detail. (Though WTO accession agreements often contain sophisticated market-access requirements.) The WTO's General Agreement on Trade in Services predates the World-Wide Web, and the WTO addresses electronic commerce only through discussions and a regularly extended "moratorium" on application of tariffs to electronic transmissions. And in contrast to goods trade, the WTO has few if any rules to limit blockages of the electronic "ports" through which data must flow to reach importers, or in a more refined version to limit the ability of governments to direct web traffic to favored search engines.

This means that in practice, digital trade is far more vulnerable to blockages and arbitrary protectionism than is traditional trade. Thus future market is less predictable, investment likely lower than it could be, and prospects of growth less certain.

Second, episodes of "forced localization" of servers suggest a different sort of challenge – more analogous to investment-forcing in goods than to protectionism. One well-known example was the Kazakhstani government's effort in 2010 to require that businesses locate their servers in Kazakhstan itself, if they wish to offer search engine service or run websites ending in the domain name *.kz*.⁹ This can reflect genuine concerns – founded or unfounded – for data security, but can also arise from industrial policy goals that reduce economic efficiency and divert investment away from the United States.

Third, and perhaps most complex, opinions diverge within technology communities as well as among governments on issues of great importance to the future digital economy, such as protection of user privacy and on-line copyright protection.

Ultimately, the appropriate goal would be a WTO agreement on Digital Trade, based on concepts similar to those developed in the General Agreement on Tariffs and Trade and the associated WTO agreements on goods. In this model, trade rules would create a presumption that data

should be able to move freely across borders, accept negotiated limits on market access for services, enable qualified professionals and other services providers to use the Internet to export high-quality services, and guarantee rights to public-interest regulation done in transparent ways and applied evenly to local and international businesses.

Governments would commit to publish their laws and regulations on these matters, and apply them without discrimination to local and international businesses alike. They would remain able to regulate for public safety, privacy, national security and crime control; still fully able to make national policy choices to limit or forbid pornography and incitements to ethnic or religious violence, or for that matter on advertisements for beer and movies; and able to negotiate limits on market access for services, just as they negotiate on cars tariffs and milk quotas. But they would give up the ability to block data flows at will and in arbitrary ways without showing a valid public-interest cause applied equally to everyone.

To date the Obama administration proceeded in a way that seems to me careful, productive, and directed toward this long-term goal. In bilateral statements with partners like Japan and the European Union, and at the OECD, the administration has helped to develop some consensus on basic principles. The OECD's 2011 statement is an example:

“The Internet Economy, as well as individuals’ ability to learn, share information and knowledge, express themselves, assemble and form associations, depend on the global free flow of information. To encourage the free flow of information online, it is important to work together to advance better compatibility across a diverse set of laws and regulations. While promoting the free flow of information, it is also essential for governments to work together towards better protection of personal data, children online, consumers, intellectual property rights, and to address cyber-security.”¹⁰

These ideas will be put to a more exacting test as negotiations proceed toward conclusion of the Trans-Pacific Partnership, the WTO's International Services Agreement talks, and a possible U.S.-European Union Trade and Investment Partnership Agreement. These provide major opportunities to find consensus with the world's most advanced economies, and also a number of developing countries, on direction for digital trade policy. But fundamentally the direction of policy appears sound - consistent with hopes for growth, with economic theory to the extent it can inform trade policymaking for a fundamentally new sector of the economy, and with a traditional American faith in the free flow of information as an inherent good.

WHAT MORE SHOULD WE KNOW?

Finally, what more do we need to know? Do our trade data enable Congress and future administrations to make informed choices about policy, and informed judgments on its results? Here the answer is simple: no, they do not.

In setting policy, explaining it to the public, or evaluating it in action, administrations and Congresses – or outside analysts – need detailed and reliable data. Those wishing to look at the effect of the North American Free Trade Agreement on trade in goods, for example, can use monthly Census Bureau reports, the ITC's Dataweb, and usatradeonline.gov to create detailed pictures of the flows of trade – by value, by weight, by country of origin and destination, by port of arrival or departure, and (to a lesser extent) by mode of transport. This can help analysts and policymakers understand the agreement's effects, and inform judgments about the next steps.

Digital trade measurements are not at all comparable. Services data in general are available only by value, only in very aggregated form, and only for 34 countries. No measurements exist for trade conducted via the Internet, and only occasional academic studies attempt to measure the scale of data flows. To conclude my presentation, then, I would like to offer some thoughts about the types of data that policymaking will need:

1. *Detailed reporting on services trade:* The Internet will likely be the main pathway for cross-border trade in services. To shape appropriate policy, services trade figures will need to be far more detailed than they now are. They should be available in finer detail by industry – for example in figures for scientific research in chemistry, aeronautics, and computer science rather than simply for “research and development,” or for bank lending, securities trading, and real-estate transactions as opposed to “financial services.” And they should cover all countries, rather than the 34 countries (and 8 regions) that now appear in the annual services-trade reports.

2. *Reporting by mode of transmission:* Apart from the Census' annual E-Commerce report, no government report offers data on the way in which services move from buyer to customer. Ideally we should know how much of our exports of services are done on-line, how many of our shipments of manufactured goods, farm products and resources are done via e-commerce, and how much travels by other means.

3. *Scale of information flows:* Finally, no report offers data on the amount of information transferred in the course of trade. Just as Census reports measure goods imports and exports by weight as well as by value, enabling analysts to (for example) estimate the energy use and emissions resulting from trade flows, we should have figures on the scale of information flows by terabyte or some other appropriate metric, the industries which are “shipping” out this data and bringing it in, the countries to which it goes and from which it arrives, and the relationship of growth in the volume of data flow to growth in the value of on-line trade.

Lacking such data, analysis and policymaking are necessarily based on assumptions, economic theory, and anecdotal evidence. This can obviously mean less informed policymaking, weaker ability to identify success and failure of policies in place, and identification of new opportunities more based on surmise and anecdote than rigorous analysis.

CONCLUSION

These last points are not so much criticism of government and Congress as observations about the present and hopes for the future. The digital world is again, very new: computers were born only a single lifetime ago, and the children born with the World Wide Web just voted in their first election last November. It is not surprising, then, that we do not yet have the sophisticated data and measurements we need to plan future policy.

The Commission's hearing today, and the two studies it will help to produce, are an exceptionally timely effort to assess this new world, and help the government and public plan for the policies and statistics that the United States will need to take full advantage of it. ProgressiveEconomy applauds your effort, look forward to its results, and am proud and pleased to take part in this panel today.

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¹ Internet World Stats, <http://www.internetworldstats.com/>, accessed 3/6/2013

² *Internet Matters: The Net's Sweeping Impact on Growth, Jobs, and Prosperity*, McKinsey & Co., May 2011, at http://www.mckinsey.com/mgi/publications/internet_matters/pdfs/MGI_internet_matters_full_report.pdf

³ See *Survey of Current Business*, Bureau of Economic Analysis, October 2012, at http://www.bea.gov/scb/pdf/2012/10%20October/1012_ininternational_services.pdf

⁴ *E-Commerce 2010*, Census Bureau, May 2012, at <http://www.census.gov/econ/estats/index.html>

⁵ <http://dataweb.usitc.gov>, accessed 2/22/2013

⁶ Census Bureau, <https://www.usatradeonline.gov/>, for exports and imports of goods by mode of transport.

⁷ *World Trade Statistics 2012*, World Trade Organization, Table 1.10, at http://www.wto.org/english/res_e/statis_e/its2012_e/its12_world_trade_dev_e.htm

⁸ *Ibid.*, Table III.10

⁹ *Enabling Trade in the Era of Information Technologies*, Google Inc., November 2010, at http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.com/en/us/googleblogs/pdfs/trade_free_flow_of_information.pdf

¹⁰ *OECD Council Recommendation on Principles for Internet Policy Making*, Organization for Economic Cooperation and Development, December 13, 2011, at <http://www.oecd.org/dataoecd/11/58/49258588.pdf>