

Should the Internet Tax Moratorium be Made Permanent?

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Introduction

Since enactment of the *Telecommunications Act of 1996*, promoting the deployment and adoption of advanced communications services, in particular high-speed Internet service (or broadband), has been a formal policy goal of the United States government. Billions have been spent to encourage deployment and adoption, and billions more will be spent each year as a result of Universal Service reform. Some progress has been made, but more is needed. It would seem, therefore, an odd time to reverse course. Yet, it appears Congress may be inclined to do so.

When the Internet was in its nascency, Congress sought to encourage adoption by keeping prices affordable. To do so, Congress passed the *Internet Tax Freedom Act of 1998* (“ITFA”), which imposed a three-year moratorium on the imposition of (new) state and local taxes on Internet access.¹ Given that state and local governments aggressively and discriminatorily tax communications services, the moratorium aimed to reduce prices significantly and, consequently, encourage adoption. Since 1998, this moratorium has been extended three times, and is due to expire again in November 2014. While there is generally broad bi-partisan support to extend – if not make permanent – the ITFA’s moratorium, given current Congressional gridlock there are no guarantees.²

In this PERSPECTIVE, I provide some estimates of the effects of a failure to renew or make permanent the ITFA on broadband adoption.

These estimates indicate that the levying of the typical state and local communications taxes on Internet connections will have a sizeable adverse effect on broadband adoption, likely erasing all reasonable estimates of the gains to Internet adoption from the billions of dollars spent to date on federal, state and private-sector programs. Indeed, given the price sensitivity of many Americans to broadband service, eliminating the ITFA will set the country back many years of broadband adoption growth. In light of such findings, the case for making the ITFA permanent is compelling.

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U.S. Policy at Promoting Broadband Adoption

Given the demonstrated social benefits of getting people on-line, promoting the deployment and adoption of advanced communications services has been an explicit goal of the United States government for nearly

two decades.³ The *Telecommunications Act of 1996*, passed during the very early stages of the Internet, is replete with multiple instructions to both the Federal Communications Commission (“FCC”) and to state regulators to use various means to encourage broadband deployment to all Americans, with a particular emphasis on deploying broadband to classrooms, libraries and healthcare facilities.⁴

Subsequent actions to encourage deployment and adoption were numerous. As already mentioned, Congress passed the ITFA in 1998. In 2004, President George W. Bush targeted, albeit informally, universal availability of high-speed Internet access by 2007.⁵ Five years ago, the *America Reinvestment and Recovery Act of 2009* (“ARRA”) assigned \$7 billion in federal expenditures to increase deployment and adoption of high-speed Internet services through a variety of programs.⁶

The continued subsidization of deployment and adoption was encouraged by the FCC’s *National Broadband Plan* in 2010.⁷ The *Plan* included a proposal to redirect some funding from the nation’s \$9 billion Universal Service fund away from traditional voice to broadband Internet connections, in addition to about \$3.5 billion in other ongoing federal support through programs like those overseen by the Rural Utilities Service.⁸ More to the point, the *National Broadband Plan* also recommended extending Lifeline and Link-up programs to help spur broadband adoption.⁹ These recommendations were subsequently implemented by the Commission in a series of orders and Further Notices of Proposed Rulemakings and recently upheld in court.¹⁰

Efforts to promote broadband adoption, particularly in disadvantaged communities, are not limited to the government. A program called ConnectKentucky was an early mover in promoting broadband deployment and adoption using public and private funds.¹¹ In fact, it would not be a stretch to say that most

broadband promotional efforts are the offspring of ConnectKentucky. More recently, Comcast’s successful and on-going Internet Essentials program, which offers broadband connections to low-income parents for \$9.99 per month, has connected about 1.2 million people (or 300,000 households) to the Internet.¹²

Private investment, buttressed by these public and private-sector efforts to increase deployment and adoption, has made broadband available to about 95% of households, with a subscription rate of about 70% at last count.¹³ While these figures are impressive, many feel there is more work to be done, especially with respect to adoption.¹⁴

With November 2014 rapidly approaching, the question policymakers now need to ask themselves is how a failure to extend the ITFA will affect these efforts? As I show below, given the size of communication service taxes and the price sensitivity of consumers, the effects on broadband adoption from failing to extend the ITFA could be substantial.

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Raising the Price of Internet Connections

Taxes on communications services are often very high and discriminatory, exceeding sales taxes in many jurisdictions. Some also claim these taxes are regressive in nature.¹⁵ Numerous estimates of state and local taxes on communications services compute average tax rates of around 10%, with many states having rates much higher.¹⁶ Taxes raise prices,¹⁷ and studies suggest that communications taxes are

often paid entirely by consumers.¹⁸ If so, then broadband prices after the expiration of the tax moratorium will rise from P to $P(1 + t)$, where t is the state and local ad-valorem tax rate.

By the law of demand, higher prices translate to lower Internet adoption. The change in quantity for a given price change can be determined using the own-price elasticity of demand, a measure of price sensitivity. Using published studies on price sensitivity, one study concludes a 10% increase in price can be expected, on average, to produce a 15% reduction in adoption.¹⁹ Some studies predict a smaller effect (e.g., a 7% drop in quantity given a 10% price increase),²⁰ but still it appears that consumers are quite sensitive to price changes, especially low-income consumers.²¹

*Across all the assumed values, allowing states and municipalities to tax Internet connections would have a significant adverse impact on adoption rates. These changes are large enough to reverse the gains in adoption funded by the multi-billion dollar federal subsidies. *** If the effective tax rate is 10%, then six years of fixed-line growth would be reversed...*

In Table 1, I summarize the reductions in broadband connections given an increase in price resulting from the levy of state and local taxes on Internet connections. The table provides a range of estimates, since there are a number of factors that may influence the outcomes. For example, some states and localities may not levy the tax, and, due to the bundling of services, the tax may only impact a portion of the bill.²² To cover the bases, I consider average effective tax rates of 2.5%, 5%,

and 10%, and own-price demand elasticities of -0.5, -1.0, and -1.5.²³ I suspect reality rests somewhere in this wide berth. At last count, the OECD estimates that there are about 91 million fixed broadband connections and 300 million wireless broadband connections in the United States.²⁴

Table 1. Adoption Declines
(in Millions)

Change in Price	Elas.	Fixed	Wireless	Total Broadband Connections Lost
2.5%	-0.50	1.13	3.75	4.88
2.5%	-1.00	2.25	7.50	9.75
2.5%	-1.50	3.38	11.25	14.63
5.0%	-0.50	2.25	7.50	9.75
5.0%	-1.00	4.50	15.0	19.5
5.0%	-1.50	6.75	22.5	29.25
10%	-0.50	4.50	15.0	19.5
10%	-1.00	9.00	30.0	39.0
10%	-1.50	13.5	45.0	58.5

The table reveals that even at the most conservative parameter values, the impact of new taxes on broadband subscriptions is very large. Assuming a 2.5% price increase and a demand elasticity of -0.50, approximately 5 million broadband Internet connections are lost to the tax. Increasing the price sensity of consumers to -1.0, the loss of lines doubles to nearly 10 million lines. These are, obviously, very large impacts on adoption, even assuming a small effective tax rate of 2.5%.

At the middle values of the parameter assumptions (a 5% price increase and an elasticity of -1.00), the U.S. drops 19.5 million broadband connections. (Based on my experience, I believe these are the perhaps the “best guess” values of the parameters.) If consumers are even more responsive to price (an elasticity of -1.5), then the U.S. loses 19.5 million connections at an average effective tax rate of 5%.

Assuming a 10% tax rate and a sensitivity rate of -1.0, adoption falls by 39 million connections. At the largest parameter values I've considered (10% price hike with an elasticity of -1.5), the country loses nearly 60 million broadband connections.

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Across all the assumed values, allowing states and municipalities to tax Internet connections would have a significant adverse impact on adoption rates. These changes are large enough to reverse the gains in adoption funded by the multi-billion dollar federal subsidies. In fact, for fixed connections, a 5% effective tax rate and an elasticity of -1.0 would undo the last four years' adoption gains. If the effective tax rate was 10%, then six years of fixed-line growth would be reversed, returning the adoption rate to the level observed in 2008. While wireless service adoption has been growing rapidly in the last few years, imposing state and local taxes on wireless broadband connections could easily reduce the adoption rate to the level seen two or three years ago.

For comparison purposes, recall that at the time the *National Broadband Plan* was released, there were 7 million homes in the U.S. without access to terrestrial fixed-broadband service.²⁵ This availability gap of 7 million homes was a key motivator in Congress' desire for a broadband plan, and a dominant factor in the *Plan's* analysis. According to the *Plan*, it would cost \$24 billion to close this gap, and the FCC later indicated that a failure to provide ubiquitous

access to broadband was an "unreasonable" level of network deployment.²⁶ Much effort has been put forth to solve this shortfall in availability. Yet, as shown in Table 1, a failure to extend the tax moratorium could easily cost the country 7 million broadband connections (not just homes passed), revealing once again the gravity of the situation. The tax moratorium is a big deal.

Though 95% of Americans have access to high-speed Internet services, 5% (or one in twenty) do not. Deployment of broadband to unserved areas is a federal policy priority. Also, the definition of "high speed" changes over time, so in the future areas now "served" could become "unserved" under a new standard. Critically, the effect of taxation will not be limited to the demand side of the market, but will also affect the supply side. As demand for broadband falls due to higher taxes, broadband service providers have less incentive to extend or upgrade their networks, imposing a greater burden on public funding to ensure widespread network deployment.²⁷ A 10% drop in demand for broadband is likely to lead to a material reduction in the financial incentives to deploy and upgrade broadband networks, thereby expanding the problems commonly associated with a "digital divide."

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International Implications

While I focus primarily in this PERSPECTIVE on the adverse impacts of failing to extend or make

permanent the ITFA on U.S. broadband adoption efforts, it is also important to note that failure to extend or make permanent the ITFA has international implications.

For example, while the OECD's broadband rankings are no longer used by most analysts as a policy-relevant measure of relative adoption, for those few who continue to obsess over OECD rankings, it should be noted that the fall in adoption caused by a failure to extend (or make permanent) the tax moratorium is also likely to lower the U.S.'s rank in broadband adoptions per capita.²⁸ For fixed-line connections, a loss of 5 million connections, which Table 1 suggests is plausible, would lower the U.S. one spot in the OECD's rankings. At the higher end of the figures in the table (13.5 million fixed lines lost), the U.S. would fall from a rank of 16 to 21. For wireless, a plausible loss of 30 million lines (a 10% drop in adoption) would move the U.S. from the 7th to the 9th spot in the OECD's rankings of mobile broadband adoption.

The international aspects of failing to renew the ITFA do not end with lowering the United States' place in OECD rankings for broadband adoption. Over the years, some have argued that U.S. broadband prices are "too high" relative to the rest of the world. While these studies have generally been discredited,²⁹ one cannot dispute the fact that, as shown here, the imposition of state and local taxes will cause U.S. broadband prices to rise *vis-à-vis* the rest of the world.

Finally, over the last several years, great effort has been extended to ensure that the Internet stays free from foreign government control. Among the motivations for this fight is the fear that somehow foreign governments—or worse, the United Nations—could impose some sort of "Internet Tax" on U.S.-based websites.³⁰ However, if the U.S. fails to extend the ITFA, then the U.S. might look a bit hypocritical in future negotiations regarding Internet

governance. Clearly then, allowing the ITFA to lapse—and, by extension, explicitly condoning the ability of state and local governments to tax the Internet at will—is not a positive example of American exceptionalism.

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Conclusion

It is axiomatic that taxes reduce consumption. In some cases, like cigarettes, the government levies taxes with the specific intent to reduce consumption. Some states aggressively tax alcohol and gasoline for the same purpose—to *reduce consumption*. However, given that a key policy goal of the United States Government for the last twenty years has been to *increase* broadband adoption—a goal to which we have allocated billions of dollars over the years—choosing now to *reduce* broadband consumption by letting the ITFA expire is an odd and counterproductive policy.

NOTES:

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¹ Internet Tax Freedom Act of 1998, Title XI of the Omnibus Appropriations Act of 1998, Pub. L. No. 105-277 (October 21, 1998) (“SEC. 1101(a) MORATORIUM.—No State or political subdivision thereof shall impose any of the following taxes during the period beginning on October 1, 1998, and ending 3 years after the date of the enactment of this Act: (1) taxes on Internet access, unless such tax was generally imposed and actually enforced prior to October 1, 1998; and (2) multiple or discriminatory taxes on electronic commerce.”)

² See *Internet Freedom's Expiration Date*, WALL STREET JOURNAL (May 13, 2014) (available at: http://online.wsj.com/news/article_email/SB10001424052702304101504579543871710711170-1MyQjAxMTA0MDEwMTEExNDExWj).

³ Indeed, as we have demonstrated, getting people on-line can do everything from aiding in job search to reducing depression in the elderly. See, e.g., T.R. Beard, G.S. Ford and H. Kim, *Capital investment and Employment in the Information Sector*, 38 TELECOMMUNICATIONS POLICY 371 (2014) (available at: <http://www.sciencedirect.com/science/article/pii/S0308596113002000>); S.R. Cotten, G.S. Ford, S. Ford, T.M. Hale, *Use and Depression Among Retired Older Adults in the United States: A Longitudinal Analysis*, JOURNALS OF GERONTOLOGY, SERIES B: PSYCHOLOGICAL SCIENCES AND SOCIAL SCIENCES (2014) (available at: <http://psychogerontology.oxfordjournals.org/content/early/2014/03/25/geronb.gbu018.full?keytype=ref&ijkey=YzN1C7N37X7dlZp>); S.R. Cotten, G.S. Ford, S. Ford, T.M. Hale, *Internet Use and Depression Among the Elderly*, 28 COMPUTERS IN HUMAN BEHAVIOR 496 (2012) (available at: <http://www.sciencedirect.com/science/journal/07475632/28/2>); G.S. Ford, *Mobile Broadband and Job Search: An Empirical Test*, PHOENIX CENTER POLICY PERSPECTIVE NO. 11-05 (September 6, 2011) (available at: <http://www.phoenix-center.org/perspectives/Perspective11-05Final.pdf>); G.S. Ford, *Internet Use and Labor Market Participation: Additional Insights from New and Old Data*, PHOENIX CENTER POLICY PERSPECTIVE NO. 11-04 (August 18, 2011) (available at: <http://www.phoenix-center.org/perspectives/Perspective11-04Final.pdf>); G.S. Ford, *Internet Use and Job Search: More Evidence*, PHOENIX CENTER PERSPECTIVE NO. 10-01 (January 26, 2010) (available at: <http://www.phoenix-center.org/perspectives/Perspective10-01Final.pdf>); T.R. Beard, G.S. Ford and R.P. Saba, *Internet Use and Job Search*, 36 TELECOMMUNICATIONS POLICY 260-273 (2012) and (available at: <http://www.sciencedirect.com/science/article/pii/S0308596111002217>).

⁴ See, e.g., 47 U.S.C. § 254; Section 706 (47 U.S.C. §1302).

⁵ N. Mudge, *President Bush Says Universal Broadband by 2007*, GOVERNMENT TECHNOLOGY (April 2, 2004) (available at: <http://www.govtech.com/policy-management/President-Bush-Says-Universal-Broadband-by.html>).

⁶ Public Law 111-5 (February 17, 2009) (available at: <http://www.gpo.gov/fdsys/pkg/PLAW-111publ5/pdf/PLAW-111publ5.pdf>).

⁷ CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN, Federal Communications Commission (March 16, 2010) (available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296935A1.pdf) (hereinafter the *National Broadband Plan*).

⁸ *Id.* at Chapter 8.

⁹ *Id.* at Chapter 9.

¹⁰ See, e.g., *In the Matter of Connect America Fund, A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; Universal Service Reform – Mobility Fund*, FCC 11-161, 26 FCC Rcd 17,663, REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING (rel. November 18, 2011), *aff'd*, *In re FCC 11-161*, ___ F. 3d ___ (10th Cir., May 23, 2014) (available at: <http://www.ca10.uscourts.gov/opinions/11/11-9900.pdf>); *In the Matter of Lifeline and Link Up Reform and Modernization; Lifeline and Link Up; Federal-State Joint Board on Universal Service; Advancing Broadband Availability Through Digital Literacy Training*, FCC 12-11, 27 FCC Rcd 6,656, REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING (rel. February 6, 2012).

¹¹ <http://www.connectkentucky.org>.

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- ¹² J. Horrigan, *The Essentials of Connectivity: Comcast's Internet Essentials Program and a Playbook for Expanding Broadband Adoption and Use in America* (March 2014) (available at: http://corporate.comcast.com/images/Final_IE_Research_Full_Paper.pdf).
- ¹³ <http://www.pewinternet.org/fact-sheets/broadband-technology-fact-sheet>.
- ¹⁴ See, e.g., Prepared Remarks of FCC Chairman Tom Wheeler, National Digital Learning Day, Library of Congress (February 5, 2014) (available at: <http://www.fcc.gov/document/fcc-chairman-tom-wheelers-remarks-national-digital-learning-day>).
- ¹⁵ D. Tuerck, P. Bachman, S. Titch, & J. Rutledge, *Taxes and Fees on Communication Services*, The Heartland Institute and Beacon Hill Institute (April 2007).
- ¹⁶ See, e.g., *id.*; S. Mackey, *Wireless Taxes and Fees Continue Growth Trend*, TAX ANALYSTS SPECIAL REPORT (2012) (available at: http://files.ctia.org/pdf/2012_Mackey_Study.pdf); Tax Foundation (available at: <http://taxfoundation.org/article/effective-state-local-federal-telecommunications-taxes-state-2004>); MyWireless.org Tax Breakdown by State (available at: <http://www.mywireless.org/state-issues/state-tax-rankings>).
- ¹⁷ The economic adage is that *taxes fall where they may, not where they are placed*, implying taxes are shared between buyers and sellers. The shares depend on the relative elasticities of demand and supply.
- ¹⁸ The literature is reviewed in J. Brito and J. Ellig, 5 JOURNAL ON TELECOMMUNICATIONS AND HIGH TECHNOLOGY LAW 199 (2006) at pp. 217-9 (available at <http://ssrn.com/abstract=940648>).
- ¹⁹ T.R. Beard, G.S. Ford, and L.J. Spiwak, *The Pricing of Pole Attachments: Implications and Recommendations*, 9 REVIEW OF NETWORK ECONOMICS 3 (2010) (available at: <http://www.bepress.com/rne/vol9/iss3/3/>) at Table 2; G.S. Ford, T.M. Koutsky and L.J. Spiwak, *The Pricing of Pole Attachments: Implications and Recommendations*, PHOENIX CENTER POLICY PAPER NO. 34 (December 2008) (available at: <http://www.phoenix-center.org/pcpp/PCPP34Final.pdf>) at Table 2.
- ²⁰ M. Dutz, J. Orszag, and R. Willig, *The Substantial Consumer Benefits of Broadband Connectivity for US Households*, Internet Innovation Alliance Working Paper (July 14, 2009) (available at: http://internetinnovation.org/files/special-reports/CONSUMER_BENEFITS_OF_BROADBAND.pdf).
- ²¹ See J. Horrigan, *Broadband Adoption and Use in America*, OBI WORKING PAPER SERIES NO. 1, *National Broadband Plan*, Federal Communications Commission (February 2010) (available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296442A1.pdf).
- ²² In the wireless sector, data services amount to about half of all revenue. For one large multi-play provider, data revenues are about 25% of total revenues. See Comcast Form 10-K (2012). Notably, the share of revenues from data services is rising quickly through time. For more data-centric providers, like fixed-wireless providers, data revenues will account for nearly all revenues.
- ²³ The own-price elasticity of demand can be used to quantify the effect on Internet adoption of the tax-driven price increase on connections resulting from the expiration of the tax moratorium. The own-price elasticity of demand measures the percentage change in the quantity purchased of some good given a percentage change in price. I assume the entire tax is passed through to consumers.
- ²⁴ OECD Broadband Portal, Total Fixed and Wireless Broadband Subscriptions by Country (available at: <http://www.oecd.org/sti/broadband/1c-TotalBBSubs-bars-2013-06.xls>).
- ²⁵ *National Broadband Plan*, *supra* n. 7 at p. 20.
- ²⁶ For a full explanation of this point, see G.S. Ford and L. Spiwak, *Justifying the Ends: Section 706 and the Regulation of Broadband*, 16 JOURNAL OF INTERNET LAW 1 (January 2013) (available at: <http://www.phoenix-center.org/papers/JournalofInternetLawSection706.pdf>).
- ²⁷ *The Broadband Availability Gap*, OBI TECHNICAL PAPER NO. 1, *National Broadband Plan*, Federal Communications Commission (April 2010) at p. 49 (available at: <http://download.broadband.gov/plan/the-broadband-availability-gap-obi-technical-paper-no-1.pdf>).

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²⁸ Per-capita rankings are now understood to be a poor measure of relative adoption. To understand why, see, e.g., G.S. Ford, *Broadband Expectations and the Convergence of Ranks*, 35 TELECOMMUNICATIONS POLICY 213 (2011) (available at: <http://www.sciencedirect.com/science/article/pii/S0308596110001321>); T.R. Beard, G.S. Ford, L.J. Spiwak, and M. Stern, *The Broadband Adoption Index: Improving Measurements and Comparisons of Broadband Deployment and Adoption*, 62 FEDERAL COMMUNICATIONS LAW JOURNAL 343 (2010) (available at: <http://www.phoenix-center.org/papers/FCLJBA1.pdf>); G. S. Ford, *Fabricating a Broadband Crisis? More Evidence on the Misleading Inferences from OECD Rankings*, PHOENIX CENTER PERSPECTIVE No. 10-05 (July 7, 2010) (available at: <http://phoenix-center.org/perspectives/Perspective10-05Final.pdf>); G.S. Ford, *Normalizing Broadband Connections*, PHOENIX CENTER PERSPECTIVE No. 09-01 (May 12, 2009) (available at: <http://phoenix-center.org/perspectives/Perspective09-01Final.pdf>); T.R. Beard, G.S. Ford and L.J. Spiwak, *The Broadband Adoption Index: Improving Measurements and Comparisons of Broadband Deployment and Adoption*, PHOENIX CENTER POLICY PAPER No. 36 (July 2009)(available at: <http://phoenix-center.org/pcpp/PCPP36Final.pdf>).

²⁹ See, e.g., G.S. Ford, *New America Foundation Misinterprets International Data (Round Three)*, @LAWANDECONOMICS (November 1, 2013) (available at: <http://phoenix-center.org/blog/archives/1647>); G.S. Ford, *New America Foundation Misinterprets International Data (Again)*, @LAWANDECONOMICS (March 7th, 2013) (available at: <http://phoenix-center.org/blog/archives/1257>); G.S. Ford, *The Misuse of International Broadband Rankings Continues*, @LAWANDECONOMICS (February 19th, 2013) (available at: <http://phoenix-center.org/blog/archives/1156>); G.S. Ford, *Be Careful What You Ask For (Redux): A Comment on the New America Foundation's Mobile Price Metrics*, PHOENIX CENTER PERSPECTIVE No. 10-06 (November 11, 2010) (available at: <http://www.phoenix-center.org/perspectives/Perspective10-06Final.pdf>); G.S. Ford, *Be Careful What You Ask For: A Comment on the OECD's Mobile Price Metrics*, PHOENIX CENTER PERSPECTIVE No. 09-03 (September 16, 2009) (available at: <http://www.phoenix-center.org/perspectives/Perspective09-03Final.pdf>).

³⁰ See, e.g., D. McCullagh and L. Downes, *U.N. Could Tax U.S.-Based Web sites, Leaked Docs Show*, CNET (June 7, 2012) (available at: <http://www.cnet.com/news/u-n-could-tax-u-s-based-web-sites-leaked-docs-show>).