
**SANCTIONING FREEDOMS:
U.S. SANCTIONS AGAINST IRAN AFFECTING
INFORMATION AND COMMUNICATIONS TECHNOLOGY
COMPANIES**

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TABLE OF CONTENTS

| | | |
|----|---------------------------------------------------------------------------------|-----|
| 1. | INTRODUCTION | 765 |
| 2. | U.S. SANCTIONS AGAINST IRAN AFFECTING ICT COMPANIES | 766 |
| | 2.1. Purpose | 766 |
| | 2.2. Broad ICT Sanctions..... | 768 |
| | 2.3. A New Understanding | 770 |
| | 2.4. Some Reforms..... | 772 |
| 3. | RESPONSES AND EFFECTS OF THE SANCTIONS REGIME | 778 |
| | 3.1. ICT Sector Decision Making..... | 778 |
| | 3.1.1. Legal Risks | 778 |
| | 3.1.2. Reputational Risks..... | 782 |
| | 3.1.3. Financial Risks | 784 |
| | 3.2. ICT Sector Responses..... | 785 |
| | 3.2.1. Social Media Tools | 785 |
| | 3.2.2. Instant Messaging, Telecommunication, and Video Communication Tools..... | 786 |
| | 3.2.3. App Stores..... | 786 |
| | 3.2.4. Cloud Computing and Educational Platforms..... | 788 |
| | 3.2.5. Products | 789 |
| | 3.3. Effects of Sanctions | 790 |
| | 3.3.1. Harm to Iranians | 790 |
| | 3.3.2. Failure to Achieve U.S. Goals | 793 |
| 4. | RECOMMENDATIONS | 795 |
| | 4.1. Government..... | 795 |
| | 4.1.1. Targeted Sanctions | 796 |
| | 4.1.2. Authorizations..... | 797 |
| | 4.1.3. Reporting | 798 |
| | 4.1.4. Financial Routes | 799 |
| | 4.1.5. Information Transparency..... | 799 |
| | 4.2. Companies | 803 |
| | 4.2.1. Making the Case to Companies..... | 803 |
| | 4.2.2. Leadership | 806 |
| | 4.2.3. Consultation | 806 |
| | 4.2.4. Human Rights Assessment..... | 807 |
| | 4.3. Civil Society | 808 |
| | 4.3.1. Advocacy | 808 |
| | 4.3.2. Information Dissemination..... | 810 |

| | |
|---------------------|-----|
| 5. CONCLUSION | 810 |
|---------------------|-----|

1. INTRODUCTION

The 2009 Green Revolution in Iran has been dubbed the “Twitter Revolution” due to the importance of social media in mobilizing protesters against a seemingly rigged election. However, the revolution also illustrated a problem with U.S. sanctions against Iran: protestors did not have access to certain information and communications technology (“ICT”) that had been restricted by sanctions or that had not otherwise been made available by companies because of perceived risks of doing business in the heavily sanctioned country.

Sanctions prohibit the exportation of technological goods and services from the United States or by U.S. persons to Iran.¹ The U.S. Department of Treasury Office of Foreign Assets Control (“OFAC”) has issued general licenses since the Green Revolution authorizing the exportation of fee and non-fee based technology.² These licenses allow the exportation of services, software, and hardware like messengers, social media platforms, applications (“apps”), web browsers, phones, and laptops.³ Despite these reforms, there is still great uncertainty and ICT companies face tremendous legal, reputational, and financial risks. The recent Joint Comprehensive Plan of Action (“JCPOA”) does little to address these risks, as it does not lift ICT sanctions. As a result, Iranians still do not have access to important ICT tools. This is significant because it impedes Iranian civilians’ ability to communicate with one another and mobilize against their

¹ Iranian Transactions and Sanctions Regulations, 31 C.F.R. § 560.204 (2015) (“[T]he exportation, reexportation, sale, or supply, directly or indirectly, from the United States, or by a United States person, wherever located, of any goods, technology, or services to Iran or the Government of Iran is prohibited . . .”). See also U.S. Dep’t of Treas., *An Overview of O.F.A.C. Regulations Involving Sanctions Against Iran* (Jan 23, 2012), <http://www.treasury.gov/resource-center/sanctions/Programs/Documents/iran.pdf> (“In general, a person may not export from the U.S. any goods, technology or services, if that person knows or has reason to know such items are intended specifically for supply, transshipment or reexportation to Iran.”).

² U.S. Dep’t of Treas., General License Related to Personal Communication Services (2010); U.S. Dep’t of Treas., General License D-1 with Respect to Certain Services, Software, and Hardware Incident to Personal Communications (2014).

³ *Id.*

government, hindering the same freedoms that sanctions are meant to protect.

This comment argues that U.S. sanctions against Iran affecting ICT companies have had adverse consequences for both Iranians and U.S. foreign policy. Sanctions have limited the ability of Iranians to access information and communicate. Resultantly, they have not had their intended effect of giving Iranian civilians ICT tools in order to support a robust civil society. U.S. foreign policy interests have thus been undermined.

This comment explores how U.S. sanctions against Iran have affected the ICT sector, what implications this has for Iranians and U.S. foreign policy, and how stakeholders can improve the sanctions regime and incentivize the ICT sector in a way that promotes both Iranians' freedoms and U.S. foreign policy interests. Section 2 of this paper reviews the sanctions regime imposed by the United States. Section 3 looks at the effect of sanctions, including how ICT companies make decisions when dealing with sanctions, what their responses have been to the sanctions regime after the U.S. government's easing of sanctions, and the implications that sanctions and companies' responses to sanctions have on Iranians' freedoms and the United States' stated goals for sanctions. Section 4 considers approaches the U.S. government, ICT companies, and civil society should take to promote the well-being of Iranians and serve U.S. foreign policy goals.

Since sanctions have had the unintended effect of restricting civil society mobilization in Iran, this comment recommends that the U.S. government further target sanctions, create more authorizations, ease financial restrictions, and increase information transparency. This would have the effect of incentivizing companies to export technology to Iran and provide these mobilization tools to Iranians. The United States should seize this opportunity to improve the sanctions regime by incentivizing companies in a way that promotes Iranians' freedoms and U.S. foreign policy goals.

2. U.S. SANCTIONS AGAINST IRAN AFFECTING ICT COMPANIES

2.1. Purpose

U.S. sanctions against Iran are incredibly expansive and complex. The U.S. government began imposing broad sanctions against Iran in response to threats to U.S. national security, foreign policy,

and the economy following the 1979 seizure of the U.S. embassy in Tehran.⁴ The purpose of the sanctions regime has evolved over time. The United States continued to impose sanctions after the hostage crisis in the 1980s and 1990s to compel Iran to cease supporting terrorist activities.⁵ In the 2000s and 2010s, sanctions were a response to concerns about Iran's nuclear proliferation program⁶ and human rights violations.⁷ Based on these foreign policy and national

⁴ Exec. Order No. 12170, 44 Fed. Reg. 65729 (Nov. 14, 1979) (blocking Iranian Government property upon finding that "the situation in Iran constitutes an unusual and extraordinary threat to the national security, foreign policy and economy"). See also U.S. Dep't of State, *Iran Sanctions*, <http://www.state.gov/e/eb/tfs/spi/iran/index.htm> (last visited Nov. 12, 2015) (providing an overview of U.S. sanctions against Iran); KENNETH KATZMAN, CONG. RESEARCH SERV., RS20871, *IRAN SANCTIONS 1* (2015) (detailing the history and objectives of initial sanctions); GARY CLYDE HUFBAUER, JEFFREY J. SCHOTT & KIMBERLY ANN ELLIOTT, *ECONOMIC SANCTIONS RECONSIDERED: HISTORY AND CURRENT POLICY* 626-35 (1st ed. 1985) (chronicling events leading up to U.S. sanctions and U.S. statements about sanctions); Patrick Clawson, *Iran*, in *ECONOMIC SANCTIONS AND AMERICAN DIPLOMACY* 85, 85 (Richard Haass ed., 1998) (describing initial sanctions against Iran under the Carter administration).

⁵ 50 U.S.C. § 1701 (2012) (granting authority to the president when there is an "unusual and extraordinary threat"). Note that the original statute was titled the Iran and Libya Sanctions Act and was retitled in 2006 after the Libya sanctions were lifted. Iran and Libya Sanctions Act of 1996, Pub. L. No. 104-172, § 3, 110 Stat. 1541, 1541 (1996) (declaring U.S. policy to "deny Iran the ability to support acts of international terrorism"). See also Clawson, *supra* note 4, at 86-89 (describing sanctions against Iran under the Reagan, Bush, and Clinton administrations to combat terrorism).

⁶ Comprehensive Iran Sanctions, Accountability, and Divestment Act, Pub. L. No. 111-195, § 3, 124 Stat. 1312, 1314 (2010) ("[I]nternational diplomatic efforts to address Iran's illicit nuclear efforts and support for international terrorism are more likely to be effective if strong additional sanctions are imposed on the Government of Iran . . ."); U.S. Dep't of State, *supra* note 4 (identifying that an aim of sanctions is "(1) to block the transfer of weapons, components, technology, and dual-use items to Iran's prohibited nuclear and missile programs; (2) to target select sectors of the Iranian economy relevant to its proliferation activities; and (3) to induce Iran to engage constructively" with the international community "to fulfill its nonproliferation obligations").

⁷ Iran Threat Reduction and Syria Human Rights Act of 2012, Pub. L. No. 112-158, § 101, 126 Stat. 1214, 1217 (2012) ("Among the economic measures to be taken are . . . (4) a focus on countering Iran's efforts to evade sanctions, including—(A) the activities of telecommunications, Internet, and satellite service providers, in and outside of Iran, to ensure that such providers are not participating in or facilitating, directly or indirectly, the evasion of the sanctions regime with respect to Iran or violations of the human rights of the people of Iran . . ."). See also DIANNE E. RENNACK, CONG. RESEARCH SERV., R43311, *IRAN: U.S. ECONOMIC SANCTIONS AND THE AUTHORITY TO LIFT RESTRICTIONS 1* (2015) (describing the human rights objectives of the sanctions regime).

security concerns, Congress and the Executive have imposed extensive sanctions affecting technology, shipping, insurance, oil, banking, trade, and aid.⁸

Sanctions specific to the ICT sector have been imposed to foster information and communication to, from, and among Iranian civilians. They also attempt to curtail censorship, monitoring, and other human rights abuses by the Iranian government. Sanctions accordingly include “sensitive technology” that could be used for censorship and surveillance, including tools that allow the Iranian government to block Internet and mobile service access.⁹ ICT sanctions were also imposed to block the transfer of technology in furtherance of Iran’s nuclear proliferation activities.¹⁰

2.2. Broad ICT Sanctions

U.S. sanctions on technology exports to Iran were initially so broad that a business journal said they “could encompass everything developed in the computer age.”¹¹ Sanctions prohibited “the exportation, reexportation, sale, or supply, directly or indirectly, from the United States, or by a United States person, wherever located, of any goods, technology, or services to Iran.”¹² This included a prohibition on the provision of Internet access by U.S. persons to Iranians.¹³

The United States then exempted information and informational materials from the President’s authority to impose sanctions.¹⁴ The

⁸ U.S. Dep’t of State, *supra* note 4; RENNACK, *supra* note 7, at 1.

⁹ Comprehensive Iran Sanctions, Accountability, and Divestment Act § 106(c) (“The term ‘sensitive technology’ means hardware, software, telecommunications equipment, or any other technology, that the President determines is to be used specifically – (A) to restrict the free flow of unbiased information in Iran; or (B) to disrupt, monitor, or otherwise restrict speech of the people of Iran.”).

¹⁰ Comprehensive Iran Sanctions, Accountability, and Divestment Act § 102.

¹¹ Clawson, *supra* note 4, at 86-89 (quoting Vahe Petrossian, *Iran Back in the Firing Line*, 36 MIDDLE E. ECON. DIG. 2, 2 (Dec. 4, 1992)).

¹² Iranian Transactions and Sanctions Regulations, 31 C.F.R. § 560.204 (2009).

¹³ Iranian Transactions Regulations, 31 C.F.R. § 560 (1991), as interpreted by U.S. Dep’t of Treas., Guidance on the Provision of Internet Connectivity Services (June 3, 2003).

¹⁴ Congress granted the Executive Branch authority to impose sanctions under 50 U.S.C. § 1702(a). The President has the authority to, “under such regulations as he may prescribe, by means of instructions, licenses, or otherwise – (A) investigate, regulate, or prohibit – (i) any transactions in foreign exchange, (ii) transfers of credit or payments between, by, through, or to any banking institution, to the extent that

Berman Amendment of 1988 created this carve-out to the President's authority.¹⁵ The Free Trade in Ideas Amendment of 1994 affirmed the Berman Amendment, broadened it to apply regardless of transmission format, and included examples of new media.¹⁶ Under the new provisions, the President could no longer regulate the exportation of any information or informational materials, regardless of format or commercial character.¹⁷

The purpose of this amendment, according to its sponsor Representative Howard Berman, was to "ensure that the President's power to regulate economic relations with foreign countries is not used to inhibit communication with the people of those countries."¹⁸ Since the Iranian government exerts strong control on the media and blocks many websites in order to limit the type of information available to Iranians,¹⁹ allowing communication with Iranian civilians increases the sources of independent information inside Iran.

The United States subsequently eased technology restrictions through guidance issued by OFAC in 2003. The guidance authorized the provision of "Internet connectivity services" to Iranian civilians "on a case-by-case basis by specific license," provided that "the main purpose is to benefit the people of Iran through increased access to information" and that "[n]o goods, technology or software will be exported, directly or indirectly, to Iran."²⁰

In 2006, the Iran Freedom Support Act ("IFSA") authorized spending to assist Iranians dedicated to "democratic values."²¹ The IFSA authorized the President to "provide financial and political assistance (including the award of grants) to foreign and domestic individuals, organizations, and entities working for the purpose of

such transfers or payments involve any interest of any foreign country or a national thereof, (iii) the importing or exporting of currency or securities" 50 U.S.C. § 1702(a) (2012).

¹⁵ Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, § 2502(a), 102 Stat. 1107, 1371 (1988).

¹⁶ Foreign Relations Authorization Act, Fiscal Years 1994 and 1995, Pub. L. No. 103-236, § 525, 108 Stat. 382, 474 (1994).

¹⁷ 50 U.S.C. § 1702(b) (2012).

¹⁸ 138 Cong. Rec. 15,052 (1992) (statement of Rep. Berman).

¹⁹ See discussion *infra* Part 3.3.1.

²⁰ U.S. Dep't of Treas., Guidance on the Provision of Internet Connectivity Services (June 3, 2003).

²¹ Iran Freedom Support Act of 2006, Pub. L. No. 109-293, § 302, 120 Stat. 1344, 1347 (2006).

supporting and promoting democracy for Iran.”²² Despite these changes, ICT sanctions were still restrictive, creating problems during the 2009 Green Revolution.

2.3. A New Understanding

The U.S. government came to realize that broad ICT sanctions were having the unintended effect of restricting Iranians’ access to information and ability to mobilize during the Green Revolution. Following controversy over election rigging during the 2009 Iranian presidential election, there were a series of protests in Iran.²³ During these protests, Iranians used mobile devices and social media platforms, particularly Twitter, to communicate with one another and organize,²⁴ even though some of these tools were not permitted in Iran at the time.²⁵ These tools were so prevalent that the revolution

²² *Id.*

²³ See generally Abbas Milani, *The Iran Primer: The Green Movement*, U.S. INST. OF PEACE, <http://iranprimer.usip.org/resource/green-movement> (providing an overview of the Green Revolution).

²⁴ See, e.g., *Iran and the “Twitter Revolution”*, PEW RESEARCH CENTER (June 25, 2009), <http://www.journalism.org/2009/06/25/iran-and-twitter-revolution> (labeling the Green Revolution as a “Twitter Revolution” and describing the use of social media in aiding the revolution); Lev Grossman, *Iran Protests: Twitter, the Medium of the Movement*, TIME (June 17, 2009), available at <http://content.time.com/time/world/article/0,8599,1905125,00.html> (discussing the role of Twitter in the protests in Iran); Andrew Sullivan, *The Revolution Will Be Twittered*, THE ATLANTIC (June 13, 2009), <http://www.theatlantic.com/daily-dish/archive/2009/06/the-revolution-will-be-twittered/200478> (exemplifying the use of Twitter during the protests in Tehran); Patrick Quirk, *Iran’s Twitter Revolution*, FOREIGN POLICY IN FOCUS (June 17, 2009), http://www.fpi.org/irans_twitter_revolution (describing the significance of web-based technology and texting in the presidential election of Iran in 2009). During protests, Twitter stated that it “recognizes the role Twitter is . . . playing as an important communication tool in Iran” and postponed a routine maintenance shutdown at the request of the U.S. State Department. Brian Bowe, Robin Blom & Eric Freedman, *Negotiating Boundaries between Control and Dissent: Free Speech, Business, and Repressitarian Governments*, in HUMAN RIGHTS AND INFORMATION COMMUNICATION TECHNOLOGIES: TRENDS AND CONSEQUENCES OF USE 36, 48 (John Lannon & Edward Halpin, eds. 2013). *Contra* Golnaz Esfandiari, *The Twitter Devolution*, FOREIGN POL’Y (June 8, 2010) (explaining that Twitter usage during Iranian protests was, in fact, for spreading information abroad: “There was no Twitter Revolution inside Iran. . . . [G]ood old-fashioned word of mouth was by far the most influential medium used to shape the postelection opposition activity”).

²⁵ Iranian Transactions and Sanctions Regulations, 31 C.F.R. § 560.204 (2009). See also Lee Baker, *The Unintended Consequences of U.S. Export Restrictions on Software and Online Services for American Foreign Policy and Human Rights*, 23 HARV. J.L. &

was referred to as a “cyberwar” by hardliners.²⁶ In response, the Iranian government blocked communications among protesters by mandating that mobile and Internet service providers turn off access just prior to elections.²⁷ The government blocked access to Twitter, Facebook, Flickr, and YouTube.²⁸ Protestors that attempted to document events had their cell phones seized and were sometimes even arrested.²⁹ The Iranian diaspora in America, which plays a large role in facilitating information flows between Iran and the United States,³⁰ was not able to provide information to protestors because of the government’s actions.³¹ This made it more difficult for protestors to communicate and organize.

The Green Revolution illustrated the importance of ICT tools in changing the course of a nation’s history. The United States came to understand “that prohibiting citizens in autocratic regimes from accessing such technology is inimical to the foreign policy objectives that animate the U.S. sanctions regime.”³² The State Department recognized this in its guidance: “Over the last several years, the world has witnessed the important role this technology can assume in holding repressive regimes accountable, assisting people in exercising their human rights and protecting emerging elements of civil society.”³³

TECH. 537, 539 (2010) (describing the illegality of providing Twitter in Iran as “an awkward fact [that] was overlooked”).

²⁶ Bowe, Blom & Freedman, *supra* note 24, at 48.

²⁷ See generally Freedom House, *Freedom on the Net: Iran* (2014), <https://freedomhouse.org/report/freedom-net/2014/iran> (describing the Iranian government’s attempts to limit information and communication among protestors by filtering websites, disrupting communication services, and blocking circumvention tools).

²⁸ Bowe, Blom & Freedman, *supra* note 24, at 48.

²⁹ Reporters without Borders, *Enemies of the Internet: Countries under Surveillance* 19 (Mar. 10, 2010), http://en.rsf.org/IMG/pdf/Internet_enemies.pdf.

³⁰ Ramin Bajoghli, *Diaspora Community (Re)Defined: Hailing Successes, Recognizing Failures*, PBS (Dec. 10, 2012, 6:52 PM), <http://www.pbs.org/wgbh/pages/frontline/tehranbureau/2012/12/opinion-community-redefined-hailing-successes-recognizing-failures.html>.

³¹ Farnaz Fassihi, *Iranian Crackdown Goes Global*, WALL ST. J. (Dec. 3, 2009, 11:59 PM), <http://www.wsj.com/articles/SB125978649644673331> (describing Iran’s deliberate attempts to cut off communications coming in and out of Iran and reciting accounts of harassment faced by the Iranian diaspora at the hands of the Iranian government).

³² Baker, *supra* note 25, at 540.

³³ U.S. Dep’t of State, Pub. Notice 8086, State Department Sanctions Information and Guidance (Nov. 8, 2012).

2.4. Some Reforms

Under this new understanding, efforts have been made since 2009 to ensure that sanctions do not interfere with Iranian civilians' access to ICT tools, while still restricting "sensitive technology" that could be used by the Iranian government for censorship and surveillance. The U.S. government's strategy changed from allowing companies to apply for specific licenses for technology³⁴ to setting general licenses for broader categories of ICT tools. Technology exports authorized under these general licenses attempt to give Iranians access to information and protect them from government monitoring and censorship.

The Victims of Iranian Censorship Act of 2009 ("VOICE Act")³⁵ aims to increase Iranians' access to information and shield Iranians against censorship attempts by the Iranian government.³⁶ It authorizes appropriations "for the dissemination of accurate and independent information to the Iranian people through radio, television, Internet, cellular telephone, short message service, and other communications."³⁷ In pursuit of this objective, appropriations can be used to counter the Iranian government's efforts to jam radio and Internet transmissions and to block short message service ("SMS") text messages.³⁸ However, the VOICE Act did not address the provision of communication tools by U.S. companies. The VOICE Act also requires the President to report non-Iranian persons, including companies, who knowingly or negligently assist the Iranian govern-

³⁴ For examples of licenses that were granted, see *Licenses Granted to U.S. Companies Run the Gamut*, N.Y. TIMES, http://www.nytimes.com/interactive/2010/12/24/world/24-sanctions.html?_r=0 (listing licenses that have been granted by OFAC, including licenses to Intelsat Global Service and WorldCom to provide Iranians with Internet access and provide for the free flow of information to and from Iran); *Companies With Permission to Bypass Sanctions*, N.Y. TIMES, <http://www.nytimes.com/interactive/2010/12/24/world/24-sanctions-list.html> (listing licenses that have been granted to "American companies to enter into transactions that would otherwise be prohibited by trade embargoes and sanctions rules").

³⁵ The VOICE Act was incorporated into the National Defense Authorization Act of 2010, Pub. L. No. 111-84, 123 Stat. 2190 (Oct. 28, 2009).

³⁶ Victims of Iranian Censorship Act of 2009, Pub. L. No. 111-84, § 1263, 123 Stat. 2190, 2553-54 (2009).

³⁷ *Id.* at § 1263, 123 Stat. at 2553.

³⁸ *Id.*

ment in censoring online information content, blocking communications, or monitoring online activities.³⁹ However, it does not stipulate enforcement mechanisms against identified persons.

The stated objective of the VOICE Act is to “aid the ability of the Iranian people to – (1) gain access to and share information; (2) exercise freedom of speech, freedom of expression, and freedom of assembly through the Internet and other electronic media; (3) engage in Internet-based education programs and other exchanges between Americans and Iranians; and (4) counter efforts – (A) to block, censor, and monitor the Internet; and (B) to disrupt or monitor cellular phone networks or SMS text exchanges.”⁴⁰ President Obama has stated that the VOICE Act is part of “U.S. efforts to ensure the free flow of information to Iran and to enhance the abilities of Iranians to exercise their universal rights.”⁴¹ Former Secretary of State Hillary Clinton has said, “[W]e believe it’s critical that [the Internet’s] users are assured certain basic freedoms. Freedom of expression is first among them. . . . Blogs, emails, social networks, and text messages have opened up new forums for exchanging ideas, and created new targets for censorship.”⁴²

OFAC thereafter amended sanctions regulations to authorize the exportation of ICT tools without a specific license.⁴³ OFAC issued the General License Related to Personal Communication Services in 2010, authorizing Internet-based personal communication services.⁴⁴ It allows “[t]he exportation from the United States or by U.S. persons, wherever located, to persons in Iran of services incident to the exchange of personal communications over the Internet . . . provided that such services are publicly available at no cost to the

³⁹ *Id.*

⁴⁰ *Id.* at § 1263, 123 Stat. at 2553-54.

⁴¹ Barack Obama, *Letter from the President Regarding Victims of Iranian Censorship Act*, THE WHITE HOUSE (Apr. 1, 2010), <https://www.whitehouse.gov/the-press-office/letter-president-regarding-victims-iranian-censorship-act>.

⁴² Hillary Clinton, *Secretary of State Hillary Rodham Clinton on Internet Freedom*, U.S. DEP’T OF STATE (Jan. 21, 2010), <http://iipdigital.usembassy.gov/st/english/texttrans/2010/01/20100121142618eaifas0.6585352.html#ixzz2nreByiQR>.

⁴³ U.S. Dep’t of Treas., General License Related to Personal Communication Services (2010) (authorizing “[t]he exportation from the United States or by U.S. persons, wherever located, to persons in Iran of services incident to the exchange of personal communications over the Internet, such as instant messaging, chat and email, social networking, sharing of photos and movies, web browsing, and blogging, provided that such services are publicly available at no cost to the user”).

⁴⁴ *Id.*

user.”⁴⁵ This includes services like “instant messaging, chat and email, social networking, sharing of photos and movies, web browsing, and blogging.”⁴⁶ The License incorporates elements of a bill introduced by Representative Moran to “support the democratic aspirations of the Iranian people by enhancing their ability to access the Internet and communications services.”⁴⁷

Soon after, the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (“CISADA”) was passed in recognition that the black market had given Iran access to sensitive dual-use technologies. CISADA imposes financial restrictions and attempts “to prevent the diversion of sensitive dual-use technologies to Iran.”⁴⁸ It defines “sensitive technology” as “hardware, software, telecommunications equipment, or any other technology, that the President determines is to be used specifically – (A) to restrict the free flow of unbiased information in Iran; or (B) to disrupt, monitor, or otherwise restrict speech of the people of Iran.”⁴⁹

The Iran Threat Reduction and Syria Human Rights Act of 2012 (“ITRSHRA”) adds new measures and procedures to the sanctions regime. It imposes sanctions on persons that knowingly transfer or facilitate the transfer of technologies that are likely to be used by the Iranian government to commit human rights abuses, including “sensitive technology.”⁵⁰ It also imposes sanctions on persons who engage in censorship or other activities that limit Iranian civilians’ freedom of expression or access to information.⁵¹

The Interpretive Guidance of 2012 issued by OFAC attempts to provide clarifications to encourage U.S. corporations to provide ICT products to Iranians.⁵² It lists illustrative, non-exhaustive examples

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ Iranian Digital Empowerment Act, H.R. 4301, 111th Congress (2009).

⁴⁸ Comprehensive Iran Sanctions, Accountability, and Divestment Act, Pub. L. No. 111-195, § 3, 124 Stat. 1312, 1315 (2010).

⁴⁹ *Id.* at § 106, 124 Stat. at 1336.

⁵⁰ Iran Threat Reduction and Syria Human Rights Act of 2012, Pub. L. No. 112-158, § 402, 126 Stat. 1214, 1252 (2012). The Act codified Executive Order 13606, 77 Fed. Reg. 24571 (Apr. 22, 2012).

⁵¹ *Id.* at § 403, 126 Stat. at 1254.

⁵² U.S. Dep’t of Treas., Interpretive Guidance and Statement of Licensing Policy on Internet Freedom in Iran (Mar. 20, 2012). That same day, President Obama said, “Because of the actions of the Iranian regime, an electronic curtain has fallen around Iran - a barrier that stops the free flow of information and ideas into the country, and denies the rest of the world the benefit of interacting with the Iranian

of products and services, including those that involve the transfer of money, that can be exported to Iran from the United States or from U.S. persons under the 2010 General License.⁵³ OFAC wanted to “ensure that the sanctions on Iran do not have an unintended chilling effect on the ability of companies to provide personal communications tools to individuals in that country.”⁵⁴

OFAC issued General License D in May 2013 to implement broader authorizations for personal communications hardware, software, and services. The license was issued in advance of the June 2013 presidential election in Iran.⁵⁵ It came amidst reports that the Iranian government had created a unit dedicated to surveilling social networking websites and was slowing Internet connection speeds.⁵⁶ Under Secretary of State Wendy Sherman denounced the Iranian government’s censorship as “a deliberate and unrelenting level of repression in the lead-up to these elections.”⁵⁷ Referring to the Iranian government’s efforts to block access to the Internet and the United States’ subsequent reform of the sanctions regime, a senior U.S. government official told the Wall Street Journal, “There’s been an increasing trend in their efforts in new and ever-more-complex and villainous ways to crack down on the free flow of information using sophisticated methods, and this is a response to their

people, who have so much to offer.” Barack Obama, *Remarks of President Obama Marking Nowruz*, THE WHITE HOUSE (Mar. 20, 2012), <https://www.whitehouse.gov/the-press-office/2012/03/20/remarks-president-obama-marking-nowruz>.

⁵³ U.S. Dep’t of Treas., *Interpretive Guidance and Statement of Licensing Policy on Internet Freedom in Iran* (Mar. 20, 2012).

⁵⁴ *Id.*

⁵⁵ Danielle Kehl, Tim Maurer & Sonia Phene, *Translating Norms to the Digital Age: Technology and the Free Flow of Information under U.S. Sanctions*, NEW AM. FOUND. 12 (Dec. 4 2013), https://static.newamerica.org/attachments/3872-translating-norms-to-the-digital-age/Translating_Norms_to_the_Digital_Age_Final.7d2eb446318f4534b87a5b7a38c4bfc3.pdf (recounting the Iranian government’s “elaborate” attempts to censor, monitor, and hinder Internet communications in advance of June 2013 elections). See also Steptoe & Johnson LLP, *OFAC Issues General License Authorizing the Export to Iran of Services, Software, and Hardware Incident to the Exchange of Personal Communications* (June 4, 2013), <http://www.step-toe.com/publications-8856.html> (contextualizing the issuance of General License D).

⁵⁶ Kehl, Maurer & Phene, *supra* note 55, at 12.

⁵⁷ Agence France-Presse, *State Department Official Denounces ‘Repression’ in Lead-up to Iranian Presidential Election*, RAW STORY (May 5, 2013), <http://www.raw-story.com/rs/2013/05/15/state-department-official-denounces-repression-in-lead-up-to-iranian-presidential-election>.

efforts.”⁵⁸ As such, General License D’s apparent goal was to provide Iranians greater access to ICT tools prior to the election.

General License D allowed the exportation of “fee-based services incident to the exchange of personal communications over the Internet, such as instant messaging, chat and email, social networking, sharing of photos and movies, web browsing, and blogging,” “fee-based software . . . that is necessary to enable [these] services” for which OFAC did not provide examples, and “consumer-grade Internet connectivity services and the provision, sale, or leasing of capacity on telecommunications transmission facilities (such as satellite or terrestrial network connectivity) incident to personal communications.”⁵⁹

Most recently in 2014, General License D-1 replaced and clarified General License D.⁶⁰ While it maintains the same authorizations for fee-based services, fee-based software, and consumer-grade Internet connectivity services, it resolved ambiguity surrounding the term “U.S. persons” in General License D.⁶¹ General License D, by its plain meaning, limited its authorization to U.S. persons and prohibited the exportation of products with U.S. component parts by non-U.S. companies from outside the United States.⁶² General License D-1 clarified that non-U.S. persons that have licensed components produced in the United States can also export technology to Iran.⁶³

Since General License D-1 was issued, OFAC has updated its frequently asked questions (“FAQs”) website.⁶⁴ However, OFAC has not issued subsequent interpretive guidance clarifying what exactly

⁵⁸ Ian Sherr, *Apple Eases Restrictions on Selling Products Headed to Iran*, WALL ST. J. DIGITS BLOG (Aug. 27, 2013, 3:48 PM), <http://blogs.wsj.com/digits/2013/08/27/apple-eases-trictions-on-selling-products-headed-to-iran/?mod=WSJBlog>.

⁵⁹ U.S. Dep’t of Treas., *General License D with Respect to the Exportation and Reexportation of Certain Services, Software, and Hardware Incident to the Exchange of Personal Communications* (2013).

⁶⁰ U.S. Dep’t of Treas., *General License D-1 with Respect to Certain Services, Software, and Hardware Incident to Personal Communications* (2014).

⁶¹ *Id.*

⁶² Danielle Kehl, *U.S. Government Clarifies Tech Authorizations under Iranian Sanctions*, NEW AM. FOUND. (Feb. 12, 2014), <https://www.newamerica.org/oti/us-government-clarifies-tech-authorizations-under-iranian-sanctions>.

⁶³ *Id.*

⁶⁴ U.S. Dep’t of Treas., *OFAC FAQs: Iran Sanctions*, http://www.treasury.gov/resource-center/faqs/Sanctions/Pages/faq_iran.aspx#gld1 (last visited Oct. 8, 2015) (answering questions regarding Iranian General License D-1).

would be allowed, as it did following the General License of 2010. This results in ambiguity that acts as a barrier for companies considering doing business in Iran.

The JCPOA, which was finalized with Iran in July 2015, will lift sanctions related to the proliferation of nuclear weapons.⁶⁵ This will have little impact on the ICT sector. The U.S. government “retains the authority to continue imposing sanctions under other authorities, such as those used to combat terrorism, destabilizing regional activity, and human rights violations.”⁶⁶ Furthermore, there is little chance that these sanctions will be removed anytime soon. Treasury Secretary Jacob Lew remarked, “[D]eal or no deal, we will continue to use all our available tools, including sanctions, to counter Iran’s menacing behavior. Iran knows that our host of sanctions focused on its support for terrorism and its violations of human rights are not, and have never been, up for discussion.”⁶⁷ In fact, the U.S. government continues to vigorously enforce and has even expanded these sanctions since reaching the agreement.⁶⁸ Therefore, the ICT sanctions regime imposed against Iran due to its human rights vio-

⁶⁵ U.S. Dep’t of Treas., Guidance Relating to the Continuation of Certain Temporary Sanctions Relief Pursuant to the JPOA Prior to Implementation of the JCPOA (Aug. 7, 2015).

⁶⁶ U.S. Dep’t of Treas., *supra* note 1. For further reading, see KATZMAN, *supra* note 4, at 1 (detailing the implications of JCPOA); Zachary Laub, *International Sanctions on Iran*, COUNCIL ON FOREIGN REL. (July 15, 2015), <http://www.cfr.org/iran/international-sanctions-iran/p20258>; Elizabeth Whitman, *What Sanctions against Iran Won’t Be Lifted? Bans for Terrorism Support, Human Rights Abuses to Remain Intact*, INT’L BUS. TIMES (July 14, 2015, 2:10 PM), <http://www.ibtimes.com/what-sanctions-against-iran-wont-be-lifted-bans-terrorism-support-human-rights-abuses-2008066> (detailing the limitations of sanctions reform).

⁶⁷ Jacob Lew, *Remarks of Treasury Secretary Jacob J. Lew to the Washington Institute*, WASHINGTON INST. (Apr. 29, 2015), <https://www.washingtoninstitute.org/policy-analysis/view/remarks-of-treasury-secretary-jacob-j-lew>.

⁶⁸ For example, from the signing of the Joint Plan of Action (“JPOA”) – an interim agreement reached in November 2013 – through the following year, the U.S. government “has sanctioned nearly 100 individuals and entities that were helping Iran evade [U.S.] sanctions, aiding Iranian nuclear and missile proliferation, supporting Iranian-sponsored terrorism, or carrying out Iran-related human rights abuses.” *Iran Nuclear Negotiations: Status of Talks and the Role of Congress: Hearing Before the S. Comm. on Foreign Relations*, 114th Cong. (2015) (statement of David S. Cohen, Under Secretary for Terrorism and Financial Intelligence, U.S. Dep’t of Treas.).

lations will remain in place for the foreseeable future. Certain reputational risks of doing business in Iran will be reduced⁶⁹ but huge risks remain for ICT companies.

3. RESPONSES AND EFFECTS OF THE SANCTIONS REGIME

The effect of the ICT sanctions regime has been to impede ICT companies from doing business in Iran due to the legal, reputational, and financial risks involved. Therefore, Iranian civilians do not have access to crucial ICT tools, and their freedoms have been restricted. As a result, the U.S. government's intentions behind ICT sanctions have been undermined.

3.1. ICT Sector Decision Making

3.1.1. Legal Risks

Before analyzing ICT responses to the sanctions regime, it is of primary importance to understand how ICT companies make decisions. There are several considerations ICT companies have when deciding how to respond to sanctions laws. For one, companies face legal risks in deciding whether to do business in countries where sanctions are imposed like Iran.

Companies face a lot of uncertainty about the sanctions regime. Sanctions regulations are incredibly complicated and vague. They cover a wide range of activities and contain vague terms like "support," "significant," and "facilitate."⁷⁰ This creates ambiguity for companies as to what technology can and cannot be legally exported to Iran.⁷¹ Additionally, sanctions regulations are frequently evolving. Companies find it difficult to predict the future shape of the sanctions regime,⁷² and therefore it is difficult for companies to form

⁶⁹ See *infra* Part 3.1.2 and Part 3.1.3 for a discussion of reputational risks and financial risks of doing business in Iran.

⁷⁰ See Edward Krauland & Anthony Rapa, *Between Scylla and Charybdis: Identifying and Managing Secondary Sanctions Risks Arising from Commercial Relationships with Iran*, 15 BUS. L. INT'L 3, 5 (Jan. 2014) (arguing that these terms create uncertainty and therefore business risks for companies).

⁷¹ *Id.*

⁷² See, e.g., J. Triplett Mackintosh & Jeremy Paner, *Iran Sanctions and Compliance Challenges Going Forward*, HOLLAND & HART LLP (Apr. 13, 2015), <http://www.hol->

business plans and strategies. ICT companies that provide services and software face unique risks in this atmosphere of uncertainty. By the nature of the online presence of the services they provide, ICT companies might find it easier to block access to their services entirely rather than risk failing to adequately block access.

Even one small misstep could create substantial legal liability, and the penalties for infringement are severe. Criminal violations of federal sanctions may result in fines of up to \$1 million and imprisonment for up to twenty years.⁷³ Civil penalties may result in fines of up to either \$250,000 or an amount twice that of the illegal transaction.⁷⁴ Violators could have their U.S. assets frozen and be prohibited from making financial transactions subject to the jurisdiction of the United States, excluding them from the lucrative U.S. market.⁷⁵ The track record of criminal and civil penalties actually faced by companies for violating the sanctions regime has been

landhart.com/iran-sanctions-and-compliance-challenges-going-forward (“The nature of the negotiations, domestic and international politics, and other factors make difficult any reasonable prediction as to the shape of future of U.S. sanctions.”).

⁷³ U.S. Dep’t of Treas., *supra* note 1.

⁷⁴ *Id.*

⁷⁵ See, e.g., Mackintosh & Paner, *supra* note 72 (advising companies on penalties arising from doing business with entities on the specially designated nationals list, including asset freezes and market exclusion); Nick Pearson & John Fusco, *Reinsurers Pressed for Compliance with Iran Sanctions*, LOCKE LORD LLP (Aug. 2013), www.lockelord.com/reinsurers-pressed-for-compliance-with-iran-sanctions-08-01-2013 (counseling reinsurers that violating sanctions might result in them being precluded from the U.S. market, being prohibited from entering into financial transactions subject to the jurisdiction of the United States, and having their property and interests blocked, the net effect of which will prevent violators from transacting in the United States).

great.⁷⁶ Furthermore, CISADA permits U.S. state and local governments to prohibit certain investment activities relating to Iran, exposing companies to additional legal risks and liability.⁷⁷

Moreover, parent companies, subsidiaries, and executives are exposed to risks for the actions of affiliate entities.⁷⁸ Persons that know or have reason to know of prohibited activities committed by any person they control are liable.⁷⁹ An entity must also disclose

⁷⁶ For example, in 2012, HSBC paid \$1.9 billion for sanctions violations after it did business with customers in Iran, Libya, Sudan, Burma, and Cuba. Aruna Viswanatha & Brett Wolf, *HSBC to Pay \$1.9 Billion U.S. Fine in Money-Laundering Case*, REUTERS (Dec. 11, 2012), <http://www.reuters.com/article/2012/12/11/us-hsbc-probe-idUSBRE8BA05M20121211>. In July 2014, BNP Paribas pled guilty to criminal charges of violating Iran sanctions, in addition to sanctions against Cuba and Sudan. It agreed to fire individuals associated with the violations and accepted that it would be unable to clear certain transactions in U.S. dollars for one year. Additionally, BNP Paribas settled for \$9 billion with U.S. prosecutors, making it the largest settlement ever for such a case. Jonathan Watson, *BNP Paribas Sanctions Case Highlights US Power over International Deals*, 68(5) IBA GLOBAL INSIGHT 4, 4 (Oct. 2014), available at <http://www.ibanet.org/Article/Detail.aspx?ArticleUid=37e22907-4a88-4a68-bbe2-52117734279e>.

⁷⁷ Comprehensive Iran Sanctions, Accountability, and Divestment Act, Pub. L. No. 111-195, § 202, 124 Stat. 1312, 1342 (2010). The N.Y. Department of Financial Services has been very active on this front and has entered into settlements with companies for violating N.Y. banking laws related to federal sanctions compliance, including settlements with Standard Chartered Bank for \$340 million, Bank of Tokyo Mitsubishi-UFJ for \$250 million, and Deloitte Financial Advisory Services for \$10 million. Meredith Rathbone, *New York DFS Looks at Non-U.S. Reinsurers' Compliance with Iran Sanctions Law*, STEPTOE & JOHNSON, <http://www.steptoec.com/assets/htmldocuments/Rathbone%20-%20WorldECR%20issue%2024.pdf>.

⁷⁸ See Milbank, Tweed, Hadley & McCloy LLP, *Expansion of the Iran Sanctions Act of 1996 and Other New Sanctions and Legal Provisions Relating to Iran* (Aug. 11, 2010), http://www.milbank.com/images/content/7/8/786/081110_Expansion_of_the_Iran_Sanctions_Actof1996.pdf (advising clients that the amended definition of "person" expands liability to financial institutions and the amended definition of "knowingly" expands liability for parent companies); Krauland & Rapa, *supra* note 70, at 6-7 (detailing the risk exposure in cases where parent companies should have known about sanctionable conduct and subsidiaries knowingly participate in sanctionable conduct); Shearman & Sterling LLP, *New US Economic Sanctions Create Risks for Non-US Financial Institutions* (Sept. 2010), http://www.shearman.com/~media/Files/NewsInsights/Publications/2010/09/New-US-Economic-Sanctions-Create-Risks-for-Non-U_/Files/View-full-memo-New-US-Economic-Sanctions%20Create-_/FileAttachment/FIA090110NewUSEconomicSanctionsCreateRisksforNon_.pdf (advising financial institutions of risks imposed by sanctions laws on the basis of what they knew and should have known).

⁷⁹ Comprehensive Iran Sanctions, Accountability, and Divestment Act § 102.

instances of prohibited activity by any affiliates.⁸⁰ Knowledge includes instances where a person has “actual knowledge” or “should have known, of the conduct, the circumstance, or the result.”⁸¹ What a parent company “should have known” has been left intentionally vague, leaving companies unsure of how much oversight and control is required.⁸²

In order to ensure compliance with sanctions laws, companies doing business in Iran need to have robust controls in place. The due diligence required is such a massive undertaking that companies must determine whether they are able to “produce, maintain and retrieve evidence of such due diligence.”⁸³ This includes having internal policies transparent to all employees, routinely assessing policies to ensure alignment with legal changes, routinely screening against the specially designated nationals (“SDN”) list,⁸⁴ having procedures in place for dealing with existing contracts with persons added to the SDN list, and maintaining records in order to file any necessary disclosures if a violation is found and an investigation needs to be conducted.⁸⁵ Such robust legal compliance controls add costs for companies considering doing business in Iran. Given the complexities and costs, ICT companies tend to be extremely adverse

⁸⁰ Iran Threat Reduction and Syria Human Rights Act of 2012, Pub. L. No. 112-158, § 219, 126 Stat. 1214, 1235 (2012).

⁸¹ Comprehensive Iran Sanctions, Accountability, and Divestment Act § 101.

⁸² Alexandra Anderson, *Good Grief! Iran Sanctions and the Expansion of American Corporate Liability for Non-U.S. Subsidiary Violations under the Iran Threat Reduction and Syria Human Rights Act of 2012*, 34 *Nw. J. INT’L L. & BUS.* 125, 143 (2013).

⁸³ David Savage & Kate Hill, *The Iran Threat Reduction Act – Insurers and Reinsurers Beware*, LEXOLOGY (Sept. 27, 2012), <http://www.lexology.com/library/detail.aspx?g=5b232505-d27a-48d3-b5b3-1805b09d180d>.

⁸⁴ The SDN list includes persons – individuals and entities – with whom U.S. persons are generally prohibited from dealing. U.S. Dep’t of Treas., *Specially Designated Nationals and Blocked Persons List* (Apr. 28, 2015), <http://www.treasury.gov/ofac/downloads/t11sdn.pdf>.

⁸⁵ See, e.g., Bill Wansley, Don Pressley & Carla Duy, *Iran Sanctions Compliance*, BOOZ ALLEN HAMILTON, <http://www.boozallen.com/media/file/Iran-Sanctions-FS-eng.pdf> (“[W]hen dealing with the possibility of covert Iranian activities, traditional due diligence is insufficient.”); Mackintosh & Paner, *supra* note 72 (advising companies to maintain compliance controls that address U.S. sanctions and prevent individuals from facilitating trade with Iran); Pearson & Fusco, *supra* note 75 (describing the extensive compliance program reinsurers should have in place); Rathbone, *supra* note 77 (listing information the N.Y. Department of Financial Services requested from about 20 non-U.S. reinsurers about their compliance with the Iran Freedom and Counter-Proliferation Act of 2012).

to the legal risks of doing business in Iran and often decide not to do business in the sanctioned country.⁸⁶

3.1.2. Reputational Risks

Companies also face reputational risks in determining whether to do business in Iran. Iran's government has a reputation within the United States of being repressive,⁸⁷ and companies that do business in Iran consequently risk being perceived by Americans as aiding a repressive government. An example of the risks that would be involved comes from a company that did business in Egypt during the Arab Spring, a time when Egypt was also reputed to have a repressive government.⁸⁸ That company, Vodafone, in 2011 complied with the Egyptian government's request to shut down its network and disconnect Egyptians from the Internet and mobile services.⁸⁹ Vodafone also handed over data on Egyptians during anti-government strikes and protests.⁹⁰ However, Vodafone had pushed back

⁸⁶ See, e.g., Danielle Kehl & Tim Maurer, *Confusing Sanctions Are Aiding Government Repression*, SLATE (May 30, 2013, 11:22 AM), http://www.slate.com/articles/technology/future_tense/2013/05/confusing_sanctions_are_keeping_important_technologies_from_iranian_activists.html (noting companies that have opted out of doing business in Iran or have pulled their business out of Iran because of associated legal risks); Kehl, Maurer & Phene, *supra* note 55, at 18 ("[C]ompanies take a risk averse approach and often continue to withhold their products until they receive additional explicit authorization in the form of interpretive guidance or specific licenses.").

⁸⁷ Roughly seven out of ten Americans hold an unfavorable view of Iran. Eighty-three percent believe that the Iranian government does not respect the rights and freedoms of its citizens, which hurts the country's image. *Global Views of Iran Overwhelmingly Negative*, PEW RESEARCH CENTER (June 11, 2013), <http://www.pewglobal.org/2013/06/11/global-views-of-iran-overwhelmingly-negative>.

⁸⁸ Janna Anderson & Lee Rainie, *New Threats*, PEW RESEARCH CENTER (July 3, 2014), <http://www.pewinternet.org/2014/07/03/net-threats> (surveying experts who describe Egypt as having a repressive regime that attempts to control information in the face of protests).

⁸⁹ *Telco Hall of Shame: Vodafone*, ACCESS (Jan. 29, 2013, 12:39 PM), <https://www.accessnow.org/blog/2013/01/29/hall-of-shame-vodafone>.

⁹⁰ Tom Espiner, *Vodafone Exec Warns against Tech Regulation*, ZDNET (Feb. 11, 2009), <http://www.zdnet.com/vodafone-exec-warns-against-tech-regulation-3039614610>.

against the government's requests and only complied after the government threatened to use its own "off switch."⁹¹ Additionally, Vodafone was transparent to the public about the situation. It updated its privacy policy to acknowledge the tensions it faced between its obligation to follow host country laws and its desire to protect users' rights to privacy and freedom of expression.⁹² It also invited NGOs to its Egyptian operations in January 2012 to observe the issues that Vodafone employees faced in dealing with government demands.⁹³ Despite all this, it received significant backlash from the public.⁹⁴ Vodafone exposed itself to reputational risks simply due to the nature of doing business in Egypt.

Another illustrative example comes from Yahoo! in 2009. Michael Samway, former Vice President and Deputy General Counsel of Yahoo!, was on his way to Singapore when a fake news story broke out claiming that he was stopped in Iran and forced to disclose information on Yahoo! users.⁹⁵ Even though the story was false, the news spread quickly, alarming Yahoo! users.⁹⁶ Yahoo! posted statements regarding the situation and clarified that no Yahoo! representative had communicated with the Iranian government and that Yahoo! had not disclosed information on its users to the government.⁹⁷ A Yahoo! statement noted, "The power of the Internet means that information travels quickly, including claims that are false."⁹⁸ This story illustrates how even non-dealings with Iran are fraught with public perception risks. News travels fast, and it is difficult to repair reputational damage after news spreads, even if that

⁹¹ James Glanz & John Markoff, *Egypt Leaders Found 'Off' Switch for Internet*, N.Y. TIMES (Feb. 15, 2011), http://www.nytimes.com/2011/02/16/technology/16internet.html?_r=2&hp=&pagewanted=all&.

⁹² *Privacy - Activity in 2011/12*, VODAFONE (2012), http://www.vodafone.com/content/index/about/sustainability/sustainability_report/issue_by_issue/privacy/activity_in_2011-12.html.

⁹³ *Id.*

⁹⁴ See, e.g., *Telco Hall of Shame: Vodafone*, *supra* note 89 (placing Vodafone in a virtual "hall of shame" for its actions in Egypt).

⁹⁵ Larry Dignan, *Retraction: Yahoo and Iran*, ZDNET (Oct. 9, 2009, 1:05 PM), <http://www.zdnet.com/article/retraction-yahoo-and-iran>.

⁹⁶ *Id.*

⁹⁷ Nicki Dugan, *No Yahoo! Meeting in Iran*, YODEL (Oct. 9, 2009, 5:11 PM), <https://yodel.yahoo.com/blogs/yahoo-emea/no-yahoo-meeting-iran-2826.html>; Michael Samway, *Iran Stories*, YAHOO! BUSINESS & HUMAN RIGHTS PROGRAM BLOG (Oct. 9, 2009, 7:47 PM), <http://yahoobhrp.tumblr.com/post/74887134903/iran-stories>.

⁹⁸ Samway, *supra* note 97.

news is proven false.⁹⁹ As a result, companies tend to be extremely careful in this space.

Furthermore, after the U.S. government's "concerted campaign" cautioning companies of the consequences of doing business in Iran,¹⁰⁰ companies see business in Iran as an inherently risky proposition, and it has become difficult for companies to shift their mindset to see it as anything but that. The JCPOA, by easing sanctions, slightly de-stigmatizes business activities in Iran and mitigates perceived reputational risks, but reputational risks still abound.

3.1.3. Financial Risks

In addition to reputational concerns, the financial considerations of a company wishing to do fee-based business in Iran are immense. Because of extremely restrictive financial sanctions, a company wishing to do business in Iran would have to find non-SDN banks. The banks must be willing to assist with financial transactions involved in the authorized sale of apps and other ICT tools by processing payments and clearing transactions, all without debiting or crediting accounts within Iran.¹⁰¹ This is a hard task since banks are hesitant to assist given the risks involved.¹⁰² Banks that are willing to bear these risks will likely charge a risk premium, creating additional costs and making it prohibitively expensive to make these transactions.

⁹⁹ See generally Brendan Nyhan & Jason Reifler, *Misinformation and Fact-checking: Research Findings from Social Science*, NEW AM. FOUND. (Feb. 2012), http://www.dartmouth.edu/~nyhan/Misinformation_and_Fact-checking.pdf (summarizing social science research on misinformation, which says misinformation spreads easily and is difficult to correct).

¹⁰⁰ Peter Feaver & Eric Lorber, *Penalty Box*, FOREIGN AFF. (June 6, 2014), <https://www.foreignaffairs.com/articles/united-states/2014-06-06/penalty-box> (explaining the risks associated with U.S. companies doing business in Iran).

¹⁰¹ Iranian Transactions and Sanctions Regulations, 31 C.F.R. 560.516(a) (2010) ("United States depository institutions are authorized to process transfers of funds to or from Iran, or for the direct or indirect benefit of persons in Iran or the Government of Iran, if the transfer . . . does not involve debiting or crediting an Iranian account . . . [and] arises from an underlying transaction that has been authorized by a specific or general license issued pursuant to this part . . .").

¹⁰² See, e.g., George Lopez & David Cortright, *Financial Sanctions: The Key to a 'Smart' Sanctions Strategy*, 72 DIE FRIEDENS-WARTE 327, 329 (1997) ("Banks are acutely sensitive to uncertainty and the perception of risk, and they may be reluctant to make commitments in nations facing financial sanctions.").

These issues drive down the risk reward for companies, as they drive up the risk relative to the reward of entering Iran. The risks associated with transactions is especially severe for app transactions, which involve thousands of small payments, compared to transactions for more expensive products that involve larger, infrequent transactions like laptops and operating systems. Since it is difficult to find legal banking channels to Iranians and the penalties of unintentionally violating sanctions are serious, “there is little incentive for companies to export fee-based goods and services.”¹⁰³

3.2. ICT Sector Responses

3.2.1. Social Media Tools

With these considerations and risks in mind, several ICT companies have responded to sanctions changes in a limited fashion. Companies are understandably hesitant to do business in Iran, even after the easing of sanctions.¹⁰⁴ With regard to social media tools, Twitter has been made available to Iranians. The Iranian government blocks Twitter, but Iranians can access Twitter using virtual private networks (“VPNs”), although these too are technically illegal under Iranian law.¹⁰⁵ However, Iranians do not have access to a key security feature: they cannot enable two-factor authentication with Twitter because they cannot add their Iranian cellphone numbers.¹⁰⁶ This makes it less secure for Iranians using Twitter and makes advocacy efforts more vulnerable insofar as Twitter accounts are made more susceptible to hacking. Twitter has not commented on why Iranian cellphone numbers cannot be added to enable this key security feature. Facebook too has been made available to Iranians but must be accessed through a VPN because of Iranian government censors.¹⁰⁷

¹⁰³ Kehl, Maurer & Phene, *supra* note 55, at 19-20.

¹⁰⁴ See Feaver & Lorber, *supra* note 100 (explaining the risks that would be associated with U.S. companies doing business in Iran).

¹⁰⁵ Lorenzo Franceschi-Bicchierai, *Twitter Adds Iran, Cuba and 20 Other Countries to Location Options*, MASHABLE (Jan. 27, 2015), <http://mashable.com/2015/01/27/twitter-iran-cuba>.

¹⁰⁶ *Id.*

¹⁰⁷ Thomas Erdbrink, *Iran Bars Social Media Again after a Day*, N.Y. TIMES (Sept. 17, 2013), available at <http://www.nytimes.com/2013/09/18/world/middleeast/facebook-and-twitter-blocked-again-in-iran-after-respite.html>.

3.2.2. *Instant Messaging, Telecommunication, and Video Communication Tools*

Communication tools have generally been made available in Iran, but the use of some tools has been restricted. Google Hangout is available in Iran.¹⁰⁸ In 2009, Yahoo! purchased Maktoob, an Arab Internet services company, and a web version of Yahoo! Messenger has since been permitted.¹⁰⁹ The use of Yahoo! Messenger on mobile devices is restricted, however. It requires SMS verification for registration, whereby a four-digit code is sent to one's mobile phone which must then be put into the service for verification.¹¹⁰ However, Iran has not been included in the list of authorized SMS codes.¹¹¹ Yahoo! has not publicly explained the reasoning for its approach.

3.2.3. *App Stores*

App stores have blocked access in Iran in whole or in part because of the financial transactions involved with many apps. Some companies have unblocked parts of their mobile app stores in Iran in response to General License D, but limitations still remain. Since August 2013, Apple has made App Store apps available for sale by third parties.¹¹² Apple updated its export compliance page and informed users that "[s]ome Apple goods and Apple software fall into these categories," referring to the categories of authorized goods and services in General License D.¹¹³ Apple again acknowledged, referring to General License D-1, that "[s]ome Apple goods and Apple software fall into these categories."¹¹⁴ With this statement, Apple is saying that a third party that sells Apple apps in Iran would

¹⁰⁸ Collin Anderson, *Chart of Services Denied Due to Sanctions* (Aug. 2014), https://docs.google.com/spreadsheets/d/1nhCRNnKtT-Klkya9dMP9jvyL1H_Onu0nOetugq_8aUSs/edit#gid=0.

¹⁰⁹ Jeffrey Ghannam, *Social Media in the Arab World: Leading up to the Uprisings of 2011*, CENTER FOR INT'L MEDIA ASSISTANCE (Feb. 3, 2011), http://www.cima.ned.org/wp-content/uploads/2015/02/CIMA-Arab_Social_Media-Report-10-25-11.pdf.

¹¹⁰ Anderson, *supra* note 108.

¹¹¹ *Id.*

¹¹² Apple, *Global Trade Compliance*, APPLE, <http://www.apple.com/legal/more-resources/gtc.html> (last visited Oct. 22, 2015).

¹¹³ *Id.*

¹¹⁴ *Id.*

not violate its vendor agreement. However, Apple is not directly offering apps there.

The Google Play Store has been made available in Iran, beginning in August 2013.¹¹⁵ However, it is “currently available only for free apps and not for priced apps or apps that use in-app billing.”¹¹⁶ Also, availability requires action by developers, who must click the opt-in button for availability in Iran.¹¹⁷ Google has not publicly explained why it is limiting its activity in Iran. The company is likely acting based on the financial risks involved with offering for-pay apps.

Some Iranians are able to bypass restrictions to access digital goods, but this is limited to the technologically savvy. For example, Iranians trying to directly access Apple’s digital sale of music, videos, and software through its iTunes and App Stores will see a “1009 error message,” which indicates that that service to the country has been blocked.¹¹⁸ Iranians can bypass the block by using VPNs, registering Apple accounts with addresses outside Iran, and using foreign gift cards.¹¹⁹ However, since black market goods are expensive and bypassing registration restrictions requires substantial technical knowledge,¹²⁰ black market goods and services are only available to the wealthy and technologically savvy.

¹¹⁵ Android Developers, #*AndroidDev*, GOOGLE PLUS (Aug. 26, 2013), <https://plus.google.com/u/0/+AndroidDevelopers/posts/YCHtLJMXkYo> (announcing, “Developers, starting today you can make your free apps available in Iran.”). See also, Frederic Lardinois, *Android Developers Can Now Use Google’s Play Store to Distribute Their Free Apps in Iran*, TECHCRUNCH (Aug. 26, 2013), <http://techcrunch.com/2013/08/26/android-developers-can-now-use-googles-play-store-to-distribute-their-free-apps-in-iran> (discussing the implications of Google’s announcement).

¹¹⁶ Android Developers, *supra* note 115.

¹¹⁷ *Id.* (“To add this country to your distribution, please visit the Pricing & Distribution page in the Developer Console and select the checkbox for Iran directly.”).

¹¹⁸ Marcus George, *Insight: Despite Sanctions, Apple Gear Booms in Iran*, REUTERS (July 13, 2012), <http://www.reuters.com/article/2012/07/13/us-apple-iran-idUSBRE86C0AY20120713>.

¹¹⁹ *Id.*

¹²⁰ See Sallar Kaboli, *What U.S. Really Did to Us Iranians*, MEDIUM (Feb. 5, 2014), <https://medium.com/@sallar/what-u-s-really-did-to-us-iranians-ac1b0ee5b621> (detailing the methods Iranians must use to access U.S. services and software).

3.2.4. Cloud Computing and Educational Platforms

Some cloud computing platforms that host websites have blocked incoming connections from Iran for every website they host due to uncertainty about what is permissible. For example, Google App Engine blocks incoming connections from Iran.¹²¹ This means that educational platforms that Google App Engine hosts, like Khan Academy,¹²² are also blocked within Iran, preventing Iranians from accessing useful educational tools. Coursera, another educational platform, has itself blocked access to Iran due to sanctions restrictions.¹²³ It explains, "Under the law, certain aspects of Coursera's course offerings are considered services and are therefore subject to restrictions in sanctioned countries . . ."¹²⁴ Coursera had previously allowed connections to its service from Iran, acting under an interpretation of "unclear" export regulations that led the company to believe that sanctions allow educational platforms like Coursera.¹²⁵ It recently received information that its interpretation was not in line with sanctions law and started blocking incoming connections from Iran to come into compliance with sanctions.¹²⁶ Iranians are therefore deprived from access to the many massive open online courses available through Coursera. GoDaddy has recently started allowing incoming connections from Iran for websites it hosts, beginning in December 2013.¹²⁷

¹²¹ Collin Anderson, *Sanctions: Reverse Filtering*, GITHUB (June 8, 2012), <https://github.com/collina/Internet-Freedom-Repository/wiki/Sanctions:-Reverse-Filtering-%28%D9%81%DB%8C%D9%84%D8%AA%D8%B1-%D9%85%D8%B9%DA%A9%D9%88%D8%B3-%29>; Anderson, *supra* note 108.

¹²² Khan Academy, *The Khan Academy Scales and Simplifies with Google App Engine* (2011) <https://cloud.google.com/files/KhanAcademy.pdf>.

¹²³ Coursera, *Update on Course Accessibility for Students in Cuba, Iran, Sudan, and Syria* (Jan. 28, 2014, 8:22 PM), <http://blog.coursera.org/post/74891215298/update-on-course-accessibility-for-students-in>.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ GoDaddy, TWITTER (Feb. 27, 2014, 9:59 PM) <https://twitter.com/GoDaddy/status/439278639944060928> ("@NIACouncil Glad you noticed. Since Dec. '13, Iran residents have been able to access and browse websites hosted with us. cc: @pooriast ^S"). See also Pooria Asteraky, *GoDaddy Stopped Sanctions Against #Iran*, POORIAST (Feb. 28, 2014), <https://pooriast.wordpress.com/2014/02/28/godaddy-stopped-sanctions-against-iran>.

3.2.5. Products

Some products have been restricted in Iran due to the risks involved in doing business there. Nokia “ceas[ed] all revenue generating activities” “due to the difficult business environment and increasing restrictions on doing business in Iran.”¹²⁸

Apple has adopted a similar approach. Apple will not sell its products directly in Iran.¹²⁹ However, Apple will sell to individuals who plan to sell to Iranians or take products into Iran.¹³⁰ An Apple spokesperson said, “Apple is no longer banned from selling Macs and iOS devices to customers who plan to bring or send those products to Iran” as a result of OFAC’s issuance of General License D.¹³¹

Despite their legality, there have been misunderstandings about sanctions regulations, which have restricted the sale of Apple products to Iran. In 2012, an Apple store in the United States, misunderstanding U.S. sanctions laws, refused to sell an iPad to a Persian speaker.¹³² The State Department spokeswoman subsequently issued a statement clarifying that “there is no U.S. policy or law that prohibits Apple or any other company from selling products in the United States to anybody who’s intending to use the product in the United States.”¹³³

Some goods are available on the black market in Iran but their availability is often in violation of U.S. sanctions law. Additionally, black market goods have not been made widely available enough to reach the masses. For example, Iranian merchants are able to source Apple products through underground trade routes and transit points in the Middle East, such as Dubai or Turkey, although illegally.¹³⁴ However, these are subject to additional duties and shipping fees, and Iranian customs for these goods range from 4% for portable products to 60% for larger components.¹³⁵ Prices increase

¹²⁸ Kehl & Maurer, *supra* note 86.

¹²⁹ Sherr, *supra* note 58.

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Jillian York, *Can Apple Refuse to Sell a Laptop to an Iranian Citizen? Maybe*, ELEC. FRONTIER FOUND. (June 21, 2012), <https://www.eff.org/deeplinks/2012/06/can-apple-refuse-sell-laptop-iranian-citizen-maybe>.

¹³³ *Id.*

¹³⁴ George, *supra* note 119.

¹³⁵ *Id.*

with these additional costs and the scarcity of black market goods, making these products only available to the wealthy elite. Iranians' access to these technologies is consequently limited to a small, well-resourced subset of the population.

Across services, software, and products, ICT companies have been cautious to enter Iran. The current complexity that companies face explains their concern.

3.3. *Effects of Sanctions*

3.3.1. *Harm to Iranians*

The result of the sanctions regime and the ICT sector's limited response to reforms has been to harm Iranians and impede the United States' stated goals.¹³⁶ Sanctions in general can be "blunt instruments" that "cause substantial collateral damage to the populace at large."¹³⁷ "[P]olicy makers overestimate their ability to calibrate and control these tools of economic statecraft," and the narrative that the U.S. government can calibrate sanctions to the precision of a "silver bullet" is incorrect.¹³⁸ Sanctions can have substantial unintended effects on the general populace in sanctioned countries.¹³⁹

The sanctions regime against Iran imposes too many risks for companies to justify doing business in Iran. As a result, companies have failed to provide Iranian civilians with important ICT tools that they need to mobilize, including technology that allows civilians to

¹³⁶ Sanctions have failed to achieve U.S. foreign policy goals with respect to empowering Iranians to mobilize and challenge their government. In other ways, sanctions have fulfilled foreign policy goals. Sanctions have hurt Iran's economy, thereby impeding Iran's ability to support terrorism and acquire and develop weapons. See Clawson, *supra* note 4, at 92-95 (laying out some consequences of sanctions, including reduced oil sales, a collapse in the value of Iranian currency, and reduced access to foreign capital). But see Clawson, *supra* note 4, at 94-95 (arguing that sanctions have failed to achieve U.S. stated objectives and have not persuaded Iran to change its behavior because Iran thinks the "price is acceptably low." Iran believes it can acquire necessary financing and technology from other countries, and its "radical foreign policy does much to puff up Iranian nationalist pride").

¹³⁷ GARY CLYDE HUFBAUER, JEFFREY J. SCHOTT, KIMBERLY ANN ELLIOTT & BARBARA OEGG, *ECONOMIC SANCTIONS RECONSIDERED* 138 (3d ed. 2009).

¹³⁸ Peter Feaver & Eric Lorber, *The Sanctions Myth*, 138 NAT'L INT. 22, 22-23 (July 2015).

¹³⁹ HUFBAUER ET AL., *supra* note 137, at 138.

spread information, communicate with one another, and counter government censorship.¹⁴⁰ Alternative tools available to Iranians are often less secure, leaving Iranians more vulnerable to government monitoring.¹⁴¹ Sanctions have therefore harmed Iranians.

Providing Iranians with ICT tools remains important as the Iranian government continues to censor communications and repress the civil and political rights of Iranians.¹⁴² The Iranian National Center for Cyberspace decides which websites should be blocked and the Ministry of Information and Communication Technology executes Iran's filtering policies.¹⁴³ The Iranian government censors roughly five million websites.¹⁴⁴ This includes websites that the government deems immoral and websites expressing dissenting and independent views.¹⁴⁵ Some of these are filtered, greeting users with a message from the Ministry of Culture and Islamic Guidance that the website has been blocked; others are shut down altogether, presenting the user with nothing at all.¹⁴⁶ Many Iranians wishing to circumvent the government's censorship use tools such as proxies and VPNs: roughly 69.3% of Iranian youths that use the Internet use

¹⁴⁰ This practice has been referred to as "reverse filtering." Reverse filtering is "the application of American Treasury sanctions to deny services to Iranian users, generally identified by their IP address. Despite revisions to the law, made March 8 2010, extending a general license for information services and software to non-government users, misapplications and ambiguity continues to unnecessarily fetter Iranians." Anderson, *supra* note 121.

¹⁴¹ See *id.* ("[I]ndividuals receive software updates and [pirated] software in markets and through media passed along, increasing their exposure to spyware and other security issues. For Iran to have a safe Internet, capable of securely sustaining activism, these unfounded prohibitions must end.").

¹⁴² See Bowe, Blom & Freedman, *supra* note 24, at 37 (classifying Iran's government as "repressitarian" because it is "repressive in terms of human rights practices and authoritarian in terms of governance").

¹⁴³ Thomas Erdbrink, *Iran Blocks Way to Bypass Internet Filtering System*, N.Y. TIMES (Mar. 11, 2013), available at http://www.nytimes.com/2013/03/12/world/middleeast/iran-blocks-software-used-to-bypass-internet-filtering-system.html?_r=0.

¹⁴⁴ U.N. Secretary General, *Situation of Human Rights in the Islamic Republic of Iran*, ¶ 33, U.N. Doc. A/HRC/28/26 (Feb. 20, 2015).

¹⁴⁵ OpenNet Initiative, *Internet Filtering in Iran* (June 16, 2009), https://opennet.net/sites/opennet.net/files/ONI_Iran_2009.pdf.

¹⁴⁶ See Hamid Farokhnia, *A Kafkaesque Realm of Cyber Censorship*, PBS FRONTLINE TEHRAN BUREAU (May 9, 2010, 12:12 AM), <http://www.pbs.org/wgbh/pages/frontline/tehranbureau/2010/05/a-kafkaesque-realm-of-cyber-censorship.html#ixzz3ZILSJXvF> (differentiating government censorship done through "filtering" with that done through "shutting down").

circumvention tools.¹⁴⁷ However, the Iranian government also blocks Iranians' attempts to bypass its censors.¹⁴⁸

In addition to censoring and blocking access to certain websites altogether, the Iranian government slows, or "throttles," Internet connection speeds to certain other websites.¹⁴⁹ This renders websites nearly unreachable but draws less attention and is less detectable. As such, this practice is harder to combat and is an effective way for the government to curb freedom of information and expression. The Iranian government also imposes restrictions on the press, further limiting independent information.¹⁵⁰

While President Rouhani is more moderate and has talked of lifting or reducing Internet censorship, it is unclear how much influence he has, as ultimate power still lies with Supreme Leader Khamenei.¹⁵¹ President Rouhani has been able to strike common ground with Khamenei to secure faster and more reliable Internet

¹⁴⁷ Mahsa Alimardani, *Nearly 70% of Young Iranians Use Illegal Internet Circumvention Tools*, GLOBAL VOICES ADVOCACY (Sept. 16, 2014, 4:22 PM), <http://advocacy.globalvoicesonline.org/2014/09/16/nearly-70-of-young-iranians-use-illegal-internet-circumvention-tools>.

¹⁴⁸ Erdbrink, *supra* note 143 (describing the Iran Ministry of Information and Communications Technology's efforts to block software used by Iranians to bypass the government's Internet censors).

¹⁴⁹ Collin Anderson, *Dimming the Internet: Detecting Throttling as a Mechanism of Censorship in Iran* 24 (Cornell University, Working Paper No. 1306.4361, 2013) (analyzing data to identify periods during which the Iranian government attempted to throttle the Internet); Mahsa Alimardani, *Iran's Internet Users Outsmart Government in Cat-and-Mouse Censorship Game*, GLOBAL VOICES ADVOCACY (Aug. 12, 2014), <http://advocacy.globalvoicesonline.org/2014/08/12/irans-internet-users-outsmart-government-in-cat-and-mouse-censorship-game> (describing the government's attempts to throttle encrypted Internet traffic, including through anonymity tools like Tor).

¹⁵⁰ See Bowe, Blom & Freedman, *supra* note 24, at 42-43 (detailing the methods by which the Iranian government restricts free press, including by monopolizing broadcast facilities, fining newspapers, closing newspapers, revoking press licenses, and imprisoning journalists). Iran ranks 173 out of 180 countries in the Press Freedom Index. Reporters without Borders, *Press Freedom Index 2015*, <https://index.rsf.org>. It ranks 190 out of 197 in the Freedom House Ranking. Freedom House, *Freedom of the Press 2014*, <https://freedomhouse.org/report/freedom-press/freedom-press-2014>. Reporters without Borders called Iran "one of the cyber-censorship's record-holding countries." Reporters without Borders, *supra* note 29, at 18.

¹⁵¹ *Smoother Operator*, ECONOMIST (Aug. 3, 2013), available at <http://www.economist.com/news/middle-east-and-africa/21582567-hassan-rohani-strikes-liberal-tone-he-ascends-presidency-smoother?fsrc=rss%7Cmea>.

speeds for Iranians.¹⁵² He has also expressed disfavor for Internet censorship and has spoken of the need to provide the technological needs of the youth, stating, “[W]e will have to do it tomorrow. If not, the day after tomorrow.”¹⁵³ However, just days after President Rouhani acknowledged that government filters are ineffective, the Ministry of Culture and Islamic Guidance blocked additional news websites.¹⁵⁴ Also, social media networks like Facebook and Twitter remain blocked.¹⁵⁵

3.3.2. Failure to Achieve U.S. Goals

In addition to harming Iranians, sanctions have failed to achieve U.S. foreign policy goals. Sanctions are “designed to coerce the leaders of the targeted regime to change policies.”¹⁵⁶ Some might claim that sanctions have been effective at achieving U.S. goals in Iran, as sanctions have hurt the Iranian economy, strained the Iranian government, and therefore given the United States enough leverage to exert diplomatic pressure and recently formulate the JCPOA of July 2015.¹⁵⁷

However, sanctions are generally less effective against non-democratic regimes like Iran where ultimate power lies with the Supreme Leader. In non-democratic systems, people have less power to change their government’s policies in response to pressure from sanctions.¹⁵⁸ Sanctions that attempt to change government policies

¹⁵² Azadeh Moaveni, *Iran: Rouhani’s Insistence on Faster Internet has Staying Power*, INDEX ON CENSORSHIP (Sept. 4, 2014), <https://www.indexoncensorship.org/2014/09/iran-rouhani-internet-3g-4g-supreme-leader-ali-khamenei>.

¹⁵³ *Id.*

¹⁵⁴ Alimardani, *supra* note 147.

¹⁵⁵ *Id.*

¹⁵⁶ HUFBAUER ET AL., *supra* note 137, at 138.

¹⁵⁷ Matthew Levitt & Peter Crail, *Can Sanctions Be Effective in Halting Iran’s Nuclear Program?*, COUNCIL ON FOREIGN RELATIONS (Oct. 19, 2007), <http://www.cfr.org/iran/can-sanctions-effective-halting-irans-nuclear-program/p14500>.

¹⁵⁸ See David Lektzian & Mark Souva, *An Institutional Theory of Sanctions Onset and Success*, 51 J. CONFLICT RESOLUTION 848, 849 (2007) (arguing that sanctions are less effective against nondemocratic target countries where sanctions allow the government to extract greater rents and do not result in political costs for the government because the larger populace, which bears the burden of the sanctions, is not part of the government’s political coalition); Susan Hannah Allen, *The Domestic Political Costs of Economic Sanctions*, 52 J. CONFLICT RESOLUTION 916, 918 (2008) (summarizing scholarship that posits the ineffectiveness of sanctions in nondemocratic

have such an effect only to the extent that the harm provokes the population to pressure their government to change; but this is unlikely to occur if the government is not incentivized to respond to the people's demands.¹⁵⁹ Additionally, where a country is able to form a nationalistic narrative about sanctions, sanctions "can also defeat their own purpose by provoking a patriotic response against the international community . . . and by rallying the population behind the leaders whose behavior the sanctions are intended to modify."¹⁶⁰

A chief objective of the ICT sanctions regime is to support Iranian civilians' freedom of information and communication and to counter human rights abuses perpetrated by the Iranian government. Since the 2009 Iranian election, U.S. sanctions have attempted "to support the ability of the domestic opposition in Iran to communicate, to reduce the regime's ability to monitor or censor Internet communications, and to sanction Iranian officials that commit human rights abuses."¹⁶¹ Reforms have been undertaken in recognition of the importance of ICT tools to these goals.¹⁶² Sanctions laws attempt to promote communications among Iranian civilians. CISADA creates an exemption for technology that helps Iranians communicate and access the Internet.¹⁶³ The General License of 2010

countries, where social suffering is not translated into political costs for the government).

¹⁵⁹ Kehl, Maurer & Phene, *supra* note 55, at 5.

¹⁶⁰ U.N. Secretary-General, *Supplement to an Agenda for Peace: Position Paper of the Secretary-General on the Occasion of the Fiftieth Anniversary of the United Nations*, U.N. Doc. A/50/60-S/1995/1 (Jan. 25, 1995).

¹⁶¹ KATZMAN, *supra* note 4, at 28.

¹⁶² See U.S. Dep't of State, Pub. Notice 8086, State Department Sanctions Information and Guidance (Nov. 8, 2012) ("The United States government supports efforts to facilitate the free flow of information and freedom of expression in Iran . . . and is cognizant of the vital importance of providing technology that enables the Iranian . . . people to freely communicate with each other and the outside world. . . . [T]he Iranian . . . government[] ha[s] taken steps to restrict the free flow of information and freedom of expression over their networks, to track and monitor the communications of their people for the purpose of perpetrating human rights abuses, or to disrupt networks in support of military operations against their own people.").

¹⁶³ Comprehensive Iran Sanctions, Accountability, and Divestment Act, Pub. L. No. 111-195, § 103, 124 Stat. 1328 (2010).

allows free personal communications services,¹⁶⁴ and General License D-1 adds authorizations for fee-based ICT services and products.¹⁶⁵ Sanctions also aim to counter the Iranian government's censorship of the Internet. CISADA prohibits the U.S. government from contracting with foreign companies that sell Iran sensitive technology that could be used to monitor or censor information and communications.¹⁶⁶ Executive Order 13606 bans U.S. trade with persons determined to be operating or selling technology that enables the Iranian government to disrupt or monitor computer usage of civilians.¹⁶⁷ ITRSHRA sanctions persons that support Iran's efforts to censor or throttle the Internet,¹⁶⁸ and Executive Order 13628 blocks the property of such persons.¹⁶⁹ In doing so, ITRSHRA restates that a goal of sanctions is to counter Iran's efforts to violate the human rights of Iranians.¹⁷⁰

Despite this goal, the U.S. sanctions regime has failed to provide Iranian civilians with the ICT tools necessary to support independent information, communication, and mobilization. Many important ICT goods and services remain unavailable or restricted in Iran,¹⁷¹ impeding an important goal of the United States' ICT sanctions regime against Iran. The to-date lack of effectiveness and harm to Iranians resulting from sanctions demonstrate a need for reform.

4. RECOMMENDATIONS

4.1. *Government*

There are several steps that need to be taken by the U.S. government, ICT companies, and civil society in order to improve the sanctions regime and bring it in line with U.S. interests and Iranians'

¹⁶⁴ U.S. Dep't of Treas., General License Related to Personal Communication Services (2010).

¹⁶⁵ U.S. Dep't of Treas., General License D-1 with Respect to Certain Services, Software, and Hardware Incident to Personal Communications (2014).

¹⁶⁶ Comprehensive Iran Sanctions, Accountability, and Divestment Act § 106.

¹⁶⁷ Exec. Order No. 13606, 77 Fed. Reg. 24571 (Apr. 22, 2012).

¹⁶⁸ Iran Threat Reduction and Syria Human Rights Act of 2012, Pub. L. No. 112-158 § 403, 126 Stat. 1214, 1254 (2012).

¹⁶⁹ Exec. Order No. 13628, 77 Fed. Reg. 62139 (Oct. 9, 2012).

¹⁷⁰ Iran Threat Reduction and Syria Human Rights Act § 101, 126 Stat. at 1217.

¹⁷¹ See *supra* Part 3.2 for an analysis of ICT tools that are unavailable or have only been made available on a limited basis.

freedoms. The U.S. government should target sanctions, implement authorizations, issue reports, create financial routes, and make information more transparent.

4.1.1. Targeted Sanctions

The U.S. government should further target sanctions. In a 2013 report by the New America Foundation, Danielle Kehl, Tim Maurer, and Sonia Phene suggest that the sanctions regime should be more targeted.¹⁷² Ideally, targeted sanctions “focus on groups of persons responsible for the breaches of the peace or the threats to international peace and security,” but “leav[e] other parts of the population and international trade relations unaffected.”¹⁷³

U.S. sanctions are already highly targeted, but further targeting would maximize the negative impact on the Iranian government while minimizing the negative impact on the general population.¹⁷⁴ Targeting sanctions can include targeting specific actors and sectors of the economy and creating exemptions for humanitarian goods and services.¹⁷⁵ These approaches tend to increase the effectiveness of sanctions regimes compared to comprehensive sanctions.¹⁷⁶

The approach that has been taken with humanitarian exceptions to sanctions¹⁷⁷ should be applied to ICT sanctions. In the late 1990s, there was an increase in humanitarian authorizations.¹⁷⁸ Sanctions regimes with humanitarian exemptions generally have carve-outs for food, medicine, and medical devices.¹⁷⁹ The approach that was

¹⁷² Kehl, Maurer & Phene, *supra* note 55, at 17.

¹⁷³ Thomas J. Biersteker, Sue E. Eckert, Peter Romaniuk, Aaron Halegua & Natalie Reid, *Targeted Financial Sanctions: A Manual for Design and Implementation*, THOMAS J. WATSON, JR. INST. FOR INT'L STUD. vi (2001).

¹⁷⁴ See Daniel W. Drezner, *How Smart are Smart Sanctions?*, 5 INT'L STUD. REV. 107, 107 (2003) (summarizing literature on smart sanctions and underlying the importance of a good understanding of the target state's domestic political economy).

¹⁷⁵ Robin Geiss, *Humanitarian Safeguards in Economic Sanctions Regimes: A Call for Automatic Suspension Clauses, Periodic Monitoring, and Follow-Up Assessment of Long-Term Effects*, 18 HARV. HUM. RTS. J. 167, 183 (2005).

¹⁷⁶ *Id.* at 183-89.

¹⁷⁷ For more on humanitarian exemptions, see *id.* at 186 (“Generally speaking, humanitarian exemption clauses exclude certain categories of goods—typically, food and medical supplies—from the sanctions regime.”).

¹⁷⁸ Kehl, Maurer & Phene, *supra* note 55, at 6.

¹⁷⁹ Food and medicine were previously subject to a specific licensing program under the Trade Sanctions Reform and Export Enhancement Act of 2000, Pub. L. No. 106-387, 114 Stat. 1549A-67 (2000). OFAC issued general licenses authorizing

applied to humanitarian aid in the 1990s should be applied to the ICT sector.

This approach is starting to be applied to the ICT sector already with the post-2009 reforms.¹⁸⁰ It should continue to be applied and should be applied with greater force and breadth. Despite recent progress, Iranians are still having difficulty accessing communications tools.¹⁸¹ The U.S. government should target ICT sanctions to restrain trade for only those technologies that are likely to be abused by the Iranian government in a way that would threaten international peace and security. This would ensure that Iranians have access to communications tools that allow them to gain information and organize political activity.

4.1.2. Authorizations

The exportation of ICT services and products should be regulated through authorizations, not exemptions. Sanctions regimes can include exemptions and authorizations.¹⁸² Both enable certain goods and services to be exported to sanctioned countries, but they differ in the way they achieve this goal.¹⁸³ Exemptions restrict U.S. agencies from preventing the exportation of particular goods and services, regulating on these issues, and issuing informational materials.¹⁸⁴ Authorizations, on the other hand, allow U.S. agencies to regulate these issues, grant licenses for the exportation of goods and services that would have otherwise been prohibited under sanc-

their sale. U.S. Dep't of Treas., General License (2012) (authorizing the exportation and reexportation of medicine and basic medical supplies); U.S. Dep't of Treas., General License (2011) (authorizing the exportation and reexportation of food items); U.S. Dep't of Treas., Clarifying Guidance: Humanitarian Assistance to Iran (Aug. 14, 2012) (clarifying that food and medicine donations are broadly authorized and do not require specific licenses).

¹⁸⁰ Kehl, Maurer & Phene, *supra* note 55, at 6.

¹⁸¹ See examination *supra* Part 3.2 (reviewing ICT tool unavailability).

¹⁸² Kehl, Maurer & Phene, *supra* note 55, at 6.

¹⁸³ *Id.*

¹⁸⁴ *Id.*

tions, update and change the scope of these licenses, and enact penalties against infringers.¹⁸⁵ The United States has used authorizations for humanitarian assistance, issuing temporary authorizations for disaster relief aid.¹⁸⁶

Granting ICT availability through authorizations as opposed to exemptions would grant U.S. agencies greater flexibility to respond to changes. Agencies would be more readily able to continue issuing interpretations and updates. It would also provide ICT companies with greater certainty: authorizations contain explicit language about what companies can export, while exemptions leave more to interpretation. There is a risk that authorizations could lead to some uncertainty; general licenses issued by OFAC can also be revoked by OFAC. However, OFAC can mitigate this uncertainty by reassuring major ICT companies through outreach.¹⁸⁷

4.1.3. Reporting

The U.S. government should couple authorizations with reporting requirements. This would be similar to reporting guidelines for investments in Burma.¹⁸⁸ The U.S. government should require companies that want to enter Iran to report to the U.S. government on their activities. As is done with investments in Burma,¹⁸⁹ such reporting should include information on human rights policies and procedures, payments to Iranian entities, property acquisitions, and risk prevention and mitigation practices.

This would allow the U.S. government to track the role that companies are playing in Iran and assess the effectiveness of the sanctions regime. It would balance the government's objectives in providing ICT tools to facilitate information and communication while addressing concerns about the exploitation of such tools by the Iranian government. In doing so, it would allow for broader

¹⁸⁵ *Id.*

¹⁸⁶ U.S. Dep't of Treas., General License No. 2 (2006) (adding a new general license authorizing transactions in the business conduct of international organizations).

¹⁸⁷ See discussion *infra* Part 4.1.5 (discussing information transparency).

¹⁸⁸ U.S. Dep't of Treas., General License No. 17 (2012); U.S. Dep't of State, *Responsible Investment Reporting Requirements* (May 23, 2013), <http://www.humanrights.gov/wp-content/uploads/2013/05/responsible-investment-reporting-requirements-final.pdf>.

¹⁸⁹ *Id.*

general licenses for ICT tools in Iran and make it easier for companies to do business there while still giving the government more oversight. There is a risk that reporting requirements would deter companies from doing business in Iran if companies begin to view these requirements as too burdensome. However, the reporting requirements are likely to be small relative to the gains to be earned from entering the largely untapped market.

4.1.4. *Financial Routes*

It is also important that OFAC facilitate financial aspects of the ICT sector opening. As mentioned above, financial restraints create additional risks for companies and dissuade them from entering Iran.¹⁹⁰ Some Iranians are able to obtain fee-based ICT tools by using foreign credit cards or by “gifting,” but these solutions are not scalable or viable in the long term since they are only feasible for a wealthy subset of the population.¹⁹¹ The JCPOA mitigates some of these issues, but several concerns remain. OFAC has so far only taken small steps to respond to civil society concerns and foreign policy objectives. It has not eased financial restraints along with its easing of restraints on ICT goods and services. It needs to take further steps to facilitate the availability of ICT tools. OFAC did this in relation to financial restraints on the delivery of humanitarian aid by creating humanitarian aid exceptions for financial transactions.¹⁹² Similarly, OFAC should create financial routes for the ICT sector in order to facilitate the exportation of personal communication goods and services.

4.1.5. *Information Transparency*

The U.S. government, through the Treasury, State, and Commerce Departments, should make information more available and

¹⁹⁰ See discussion *supra* Part 3.1.3 (discussing the financial risks for companies).

¹⁹¹ Kehl, Maurer & Phene, *supra* note 55, at 19-20 (examining the processing of financial transactions).

¹⁹² U.S. Dep’t of Treas., Clarifying Guidance: Humanitarian Assistance and Related Exports to the Iranian People (Feb. 6, 2013) (clarifying that financial institutions are permitted to process financial transactions necessary to facilitate the trade of humanitarian exports to Iran and financial transactions in support of trade in certain food, medicine, and medical devices from the United States).

transparent in order to clarify sanctions laws to companies. Although OFAC has answered some questions related to General License D-1 through the FAQs section of its website,¹⁹³ OFAC should frequently update answers to FAQs about the license.

Furthermore, OFAC should offer further interpretive guidance on permissible actions, as it did after the General License of 2010. Guidance should include information on the distinction between “personal” and “commercial” ICT. General License D-1 “does not authorize . . . [t]he exportation or reexportation, directly or indirectly, of web-hosting services that are for *commercial* endeavors or of domain name registration services.”¹⁹⁴ The license does not make it clear whether websites that are mainly used for personal communications but also allow commercial transactions would be covered under existing licenses.¹⁹⁵ Web-hosting companies also face a lot of uncertainty about what websites they can permissibly host. For example, during the 2013 elections in Iran, U.S. web-hosting company Just Host shut down the website of a candidate.¹⁹⁶ To remedy this ambiguity, OFAC should issue interpretive guidance defining “personal” and should offer examples of permissible goods and services.

OFAC should also conduct periodic outreach efforts with large and mid-sized ICT companies to routinely inform them about recent changes in sanctions laws. This is especially important since interpretive guidance has not been issued since General License D-1 was set. OFAC should likewise reach out on the financial side to large and mid-sized banks to clarify how the changes impact financial transactions. This is crucial for true and sustainable success on the

¹⁹³ U.S. Dep’t of Treas., *OFAC FAQs: Iranian General License D-1*, http://www.treasury.gov/resource-center/faqs/Sanctions/Pages/faq_iran.aspx (last visited Oct. 8, 2015) (answering questions regarding Iranian General License D-1).

¹⁹⁴ U.S. Dep’t of Treas., *General License D-1 with Respect to Certain Services, Software, and Hardware Incident to Personal Communications* (Feb. 7, 2014) (emphasis added).

¹⁹⁵ Kehl, Maurer & Phene, *supra* note 55, at 20 (discussing the difference between personal and commercial communications technology).

¹⁹⁶ Just Host shut down Mehdi Karoubi’s website, telling him that the company could no longer host his website www.karroubi.ir. The company cited U.S. sanctions laws for the action, stating, “This sanction extends to include the country-code top level domains .IR, .SY, .KP, and .CU (Iran, Syria, North Korea, and Cuba).” Yeganeh Torbati, *U.S. Sanctions Force Closure of Opposition Leader’s Website*, REUTERS (Sept. 16, 2013, 8:14 AM), <http://www.reuters.com/article/2013/09/16/us-iran-usa-sanctions-idUSBRE98F0BU20130916>.

ICT side. Banks need to understand what is legal and what sanctions reform mean for them in order to feel comfortable assisting ICT companies in making their technologies available.

Such guidance, interpretations, and outreach efforts would mitigate the risk that a company's interpretation of sanctions laws might differ from that of the government's. This is a problem that frequently arises, as a sanctions attorney explains: general license authorizations are "open authorizations subject to interpretation."¹⁹⁷ "[C]ompanies construe them broadly to try to justify every conceivable transaction they want to engage in with the sanctioned country."¹⁹⁸ However, "the U.S. Government construes the general licenses narrowly in order to prevent the stretching of such authorizations to those transactions which it actually doesn't want to be covered but for which the general authorization could conceivably extend to."¹⁹⁹ As a result of this discrepancy, companies "can easily be held liable . . . if they do not fully comprehend or guess OFAC's intention correctly."²⁰⁰

The U.S. government should make information transparent to American civil society as well. This is a worthy goal because an informed civil society can appropriately compel the U.S. government to reform the sanctions regime and pressure U.S. companies about their business practices. Already, the Iranian diaspora in the United States and other concerned U.S. persons have played an active role in foreign policy discussions by lobbying Congress, publishing articles, and speaking to think tanks in order to bring about change in the sanctions regime.²⁰¹

To achieve information transparency, the U.S. government, including the Treasury, State, and Commerce Departments, should publish information about the impact that sanctions has on civilians in sanctioned countries. The U.S. Department of State publishes annual human rights reports on the human rights practices of various

¹⁹⁷ Erich Ferrari, *OFAC General License D: Is the "D" for Deceiving?*, SANCTION LAW, (Sept. 20, 2013), <http://sanctionlaw.com/ofac-general-license-d-is-the-d-for-deceiving> (recounting his experience as a sanctions attorney with companies under investigation by OFAC).

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ See discussion *infra* Part 4.3.1 (discussing civil society advocacy).

countries.²⁰² Reports could incorporate information about the effect sanctions have on civilians' human rights.

The U.S. government should also incorporate human rights ratings into existing reports, rating companies based on the impact their practices have on the human rights and freedoms of individuals in those countries. These assessments could be based on the ICT sector guide put forth by the European Commission.²⁰³ The ratings should include top ICT companies, both those that do and do not do business in Iran. Companies that chose not to do business in Iran or block authorized services and products in Iran should lose points: this would mitigate the risk that companies would refrain from doing business in Iran out of fear that they might receive a low rating relative to other companies doing business in Iran.

Furthermore, there needs to be information transparency to inform Iranians about U.S. sanctions and counter any misinformation from the Iranian government. This would allow Iranians to appropriately pressure their government for reform. The U.S. government is already making social media outreach efforts to Iranians. The U.S. State Department's Persian language spokesperson Alan Eyre discusses sanctions through his Twitter account and through interviews with Iranian newspapers.²⁰⁴ President Obama creates a video on YouTube annually for Iranians also explaining sanctions.²⁰⁵ While there is no U.S. embassy in Iran, there is a virtual embassy that explains U.S. policy.²⁰⁶ There is also a U.S. satellite radio program, Voice of America, which provides news, including explanations of sanctions, in English and Farsi among other languages.²⁰⁷ These efforts should become more frequent and be available on more platforms to reach more people.

²⁰² An example of these reports can be found at U.S. Dep't of State, Bureau of Democracy, H.R. and Lab., *Iran 2014 Human Rights Report (2014)* (reporting on the Iranian government's human rights practices).

²⁰³ See, e.g., EUROPEAN COMMISSION, *ICT SECTOR GUIDE ON IMPLEMENTING THE UN GUIDING PRINCIPLES ON BUSINESS AND HUMAN RIGHTS (2011)* (detailing methods of achieving human rights compliant business practices).

²⁰⁴ Alan Eyre, @AlanEyre1, TWITTER, <https://twitter.com/AlanEyre1> (last visited Oct. 22, 2015).

²⁰⁵ The White House, *President Obama's Nowruz Message to the Iranian People*, YOUTUBE (Mar. 20, 2014), <https://www.youtube.com/watch?v=-g2nZ5-4AIY>.

²⁰⁶ VIRTUAL EMBASSY OF THE UNITED STATES, <http://iran.usembassy.gov> (last visited Oct. 22, 2015).

²⁰⁷ VOICE OF AMERICA, <http://www.voanews.com> (last visited Oct. 22, 2015).

4.2. Companies

4.2.1. Making the Case to Companies

To get companies to export ICT tools to Iran, the ICT sector needs to be persuaded to do business in Iran. There are several reasons ICT companies should enter Iran. First, there is a strong business case for entry. Iran is a large and nearly untapped market. It has a sizable population of eighty million people, the second largest in the Middle East and seventeenth largest in the world.²⁰⁸ Iranians are highly educated, and they are engaged technology and Internet users.²⁰⁹ Internet usage among the population has steadily increased from 8.1% in 2005, to 15.9% in 2010, and to 39.4% in 2014.²¹⁰ The percentage of individuals using the Internet is almost five times what it was in 2005. Iran has a largely literate population of 89.4%.²¹¹ It also has a big youth population: the median age is 28.3,²¹² and over 60% of the population is under thirty years old.²¹³ About 23.5 million youth use the Internet.²¹⁴ Despite restrictions imposed by the Iranian government, Iranians are still active online. In early 2009, there were about 60,000 blogs routinely updated in Iran.²¹⁵ Iranian youth “gravitate towards the Internet to avoid cultural and political obstacles in their lives and expectations to follow social

²⁰⁸ Majid Rafizadeh, *Doing Business with Post-Sanctions Iran: Risks and Opportunities*, HUFFINGTON POST (Aug. 8, 2015, 5:35 PM), http://www.huffingtonpost.com/majid-rafizadeh/doing-business-with-post_b_7960484.html.

²⁰⁹ World Bank, *Iran, Islamic Rep.* (2015), <http://data.worldbank.org/country/iran-islamic-republic>. See also Behrang Tajdin, *Will Iran's National Internet Mean No World Wide Web?*, BBC NEWS (Apr. 27, 2013), <http://www.bbc.com/news/world-middle-east-22281336> (discussing the Iranian government's initiative to create a nationwide intranet and setting out the population's ingenuity in accessing the World Wide Web).

²¹⁰ World Bank, *Internet Users (per 100 People)* (2015), <http://data.worldbank.org/indicator/IT.NET.USER.P2>.

²¹¹ U.S. CENTRAL INTELLIGENCE AGENCY, *THE WORLD FACTBOOK* (2015), <https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html>.

²¹² *Id.*

²¹³ Rafizadeh, *supra* note 208.

²¹⁴ Alimardani, *supra* note 147.

²¹⁵ John Kelly & Bruce Etling, *Mapping Iran's Online Public: Politics and Culture in the Persian Blogosphere*, HARVARD UNIVERSITY BERKMAN CENTER FOR INTERNET AND SOCIETY (Apr. 2008), http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Kelly&Etling_Mapping_Irans_Online_Public_2008.pdf.

norms.”²¹⁶ Additionally, NGOs in Iran that would like to use ICT tools to advertise to and educate Iranians on human rights issues would provide a market for companies.

ICT companies that enter Iran would gain a competitive advantage. They would benefit from being some of the first companies to enter Iran and would gain the opportunity to dominate the market. They would also avoid risks associated with not entering Iran early, namely being left behind and being pressured by competitors that make money off of their activity in Iran. Companies would also benefit from reciprocal effects, such as family and friends of Iranians hearing about the technology their Iranian acquaintances are using and going on to use the same technology. Likewise, U.S. companies should do business in Iran to place them on equal footing with companies in other nations that will surely be taking advantage of the emerging market.²¹⁷

Second, there is an ethical case to be made to companies. Many ICT companies have great size, power, and reach. By entering Iran, these companies can use their power to facilitate communication among Iranians and make a positive impact in Iran. Crowdsourced information from social media websites provides an opportunity to spread information during protests.²¹⁸ Non-Iranian reporters were severely restricted during the 2009 elections, and so they had to rely on Iranians posting information on social media websites.²¹⁹ Addi-

²¹⁶ Ali Asghar Kia, *Iranian Youth Online: Identity between Traditional and Modern Lifestyles*, COMMUNITY BROADCASTING ASSOCIATION OF AUSTRALIA (Feb. 3, 2015), <https://www.cbaa.org.au/article/iranian-youth-online-identity-between-traditional-and-modern-lifestyles>.

²¹⁷ Eric Lorber & Elizabeth Rosenberg, *Dollar Diplomacy in Tehran*, FOREIGN AFF. (July 14, 2015), <https://www.foreignaffairs.com/articles/iran/2015-07-15/dollar-diplomacy-tehran> (encouraging U.S. companies to enter Iran to “ensure that Iran’s new commercial relationships do not pivot exclusively to Asia”).

²¹⁸ Jessica Heinzelman & Patrick Meier, *Crowdsourcing for Human Rights Monitoring: Challenges and Opportunities for Information Collection and Verification*, in HUMAN RIGHTS AND INFORMATION COMMUNICATION TECHNOLOGIES: TRENDS AND CONSEQUENCES OF USE, *supra* note 24 at 123, 129 (arguing that traditional human rights reporting faces challenges of capacity, cost, and access that crowdsourcing can solve).

²¹⁹ See, e.g., Steve Herrmann, *Social Media in Iran*, BBC (June 16, 2009, 12:51 PM), http://www.bbc.co.uk/blogs/legacy/theeditors/2009/06/social_media_in_iran.html (explaining BBC’s reasons for monitoring social media during the 2009 protests, including to counteract heavy restrictions placed on foreign journalists in Iran and based on a desire to follow the “huge ongoing, informed and in-

tionally, increased access to U.S. products and services would increase security. Individuals in sanctioned countries are forced to use alternative communication tools, which are often less secure than products made in the United States.²²⁰ Alternatives are more vulnerable to government surveillance and interference, putting activists at risk.²²¹ The contribution that ICT companies can make toward advancing Iranians' freedoms might even be noticed by U.S. consumers, who might go on to buy their products as a result.

Third, companies should be persuaded by the reputational effects of doing business in Iran. Just as doing business in Iran can create reputational risks, failing to enter Iran can also provoke negative press. Entering Iran in a way that improves Iranians' freedoms can create positive press for companies, which might in turn inspire U.S. consumers to buy their goods and services.

Fourth, there is a legal case to be made. Corporate social responsibility ("CSR") is an expanding area of law. Increasingly, domestic and international legal regimes have expanding CSR laws.²²² Companies should see CSR laws as something they can get ahead of and use to their advantage. By ensuring CSR compliance, companies can improve their bottom line and lower reputational and legal costs from non-compliance.

formative discussion in Iran between people who care deeply about what is happening there and who are themselves monitoring everything they can, then circulating the most useful information and links"); Heinzelman & Meier, *supra* note 218, at 128-129 ("[D]uring Iran's 'Twitter Revolution,' CNN's David Mattingly stated in one news case, 'Because Western journalists are not allowed to cover these events, we are looking at the social networking sites and seeing what's posted on there.'").

²²⁰ See Anderson, *supra* note 121 (describing how tools available to Iranians "increas[e] their exposure to spyware and other security issues").

²²¹ Sanctions have led to a similar situation in Sudan, where sanctions are also imposed. Sudanese activist Anwar Dafa-alla said of the sanctions, "The U.S. sanctions have empowered the government security agencies against the activists online, because there [are] few anonymity tools available for them, and many of them are not tech savvy. Not being able to update your software makes you an easy catch for the highly trained security officers." Danielle Kehl & Tim Maurer, *Time to Rethink Tech Sanctions against Sudan*, SLATE (Jan. 30, 2014, 10:24 AM), http://www.slate.com/articles/technology/future_tense/2014/01/sudan_sanctions_are_keeping_secure_communications_tools_from_activists.html.

²²² See John Ruggie, *Business and Human Rights: The Evolving International Agenda* 17-18 (Harvard University John F. Kennedy School of Government Corporate Social Responsibility Initiative, Working Paper No. 38, June 2007) (chronicling the "expanding jurisdictional web" of corporate social responsibility laws and the resulting "increased liability risks" that companies face).

4.2.2. Leadership

After ICT companies are persuaded that entering Iran is a valuable proposition, there needs to be leadership within companies that is willing to make tough decisions and take risks. Leaders at companies will have to resolve tensions between those that want to take advantage of potentially lucrative business opportunities and those that want to steer clear of risks accompanying such business opportunities. Leaders at companies need to be willing to boldly pursue lucrative business opportunities, even when the legal compliance costs might tempt leaders to stay away from such opportunities.

There also needs to be leadership within the industry. Companies with the resources to do so should do business in Iran and be among the first players in the market. The ICT sector has had a history of a lot of interplay: if one company does something, others will soon follow.²²³ Therefore, companies should lead other companies in the ICT sector by acting and resultantly persuading others to act on the business opportunities in Iran.

4.2.3. Consultation

In addition to leadership, companies within the ICT sector should consult with one another in regards to sanctions. This could be similar to other multi-stakeholder initiatives, like the Global Network Initiative.²²⁴ The effort should similarly encourage an exchange of best practices regarding ways to do business in Iran in a

²²³ See generally *supra* Part 3.2.

²²⁴ The Global Network Initiative includes ICT companies (Facebook, Google, LinkedIn, Microsoft, Procer Networks, and Yahoo!), eight academic organizations, thirteen civil society organizations, and nine investors. It was established in response to "government pressure to comply with domestic laws and policies in ways that may conflict with the internationally recognized human rights of freedom of expression and privacy" and aims to "protect and advance freedom of expression and privacy in the ICT sector" by providing a framework of best practices. GLOBAL NETWORK INITIATIVE, <https://www.globalnetworkinitiative.org> (last visited Oct. 23, 2015). Of the initiative, former Secretary of State Hillary Clinton said, "The initiative goes beyond mere statements of principles and establishes mechanisms to promote real accountability and transparency." Hillary Clinton, *Remarks on Internet Freedom*, U.S. DEP'T OF STATE (Jan. 21, 2010), <http://www.state.gov/secretary/20092013clinton/rm/2010/01/135519.htm>. But see Ronald Deibert & Rafal Rohozinski, *Risking Security: Policies and Paradoxes of Cyberspace Security*, 4 INT'L POL. SOCIOLOGY 15, 26 fn. 7 (2010) ("The effectiveness of such self-regulation is untested and still questionable"); Justine Nolan, *The China Dilemma: Internet Censorship and*

human rights promoting manner. Such an initiative would make more hesitant companies more comfortable about entering Iran.

4.2.4. *Human Rights Assessment*

Once a company enters Iran, it should assess its human rights impact to conform to the U.N. Guiding Principles on Business and Human Rights, as set out by former U.N. Special Rapporteur for Business and Human Rights John Ruggie.²²⁵ Under the Principles, businesses “should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved.”²²⁶ They should “avoid causing or contributing to adverse human rights impacts through their own activities, and address such impacts when they occur.”²²⁷ These obligations apply “regardless of their size, sector, operational context, ownership and structure.”²²⁸

Companies should have policies and practices to meet these responsibilities.²²⁹ The policies should indicate expected personnel and business partners, indicate procurement practices, set financial and performance incentives for personnel, and be made publicly available. Companies should conduct due diligence to identify, prevent, and mitigate human rights impacts, both actual and potential. They should also draw on human rights expertise and consult with potentially affected groups, such as Iranian protest groups, in order to more fully appreciate human rights risks.

Human rights assessments should be started as early as possible after a company enters Iran and should be conducted at regular intervals. Companies should act upon findings in human rights assessments and track the effectiveness of their responses. Companies

Corporate Responsibility, 4 *ASIAN J. COMP. L.* 1, 24 (2009) (“Voluntary codes of conduct that aim to delineate corporate responsibility for human rights can aid protection of such rights but cannot alone ensure uniform protection.”).

²²⁵ John Ruggie (Special Representative of the Secretary General on the issue of Human Rights and Transnational Corporations and Other Business Enterprises), *Report on Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework*, U.N. Doc A/HRC/17/31 (Mar. 21, 2011).

²²⁶ *Id.* at 13.

²²⁷ *Id.* at 14.

²²⁸ *Id.* at 14.

²²⁹ *Id.* at 15.

should also publicly release information about their practices, including information about government requests to restrict information and responses to these requests. Google has done this by releasing a transparency report online since 2010.²³⁰

Cloud computing platforms should be transparent with consumers. They do not always notify new or existing customers about their actions. When GoDaddy was restricting access to Iranians attempting to access websites it hosts, GoDaddy did not inform customers.²³¹ It even claims that web hosting “allows people around the world to find and view your website,” without exception.²³² This is a problem because many hosted websites might not know they are being blocked by their hosting companies. Consequently, advocacy and education websites wishing to reach Iranians might not know their efforts are being blocked. Without such information, they cannot act appropriately and seek other avenues to reach Iranians. Although hosting services might not want to inform customers that they are blocking websites in Iran and likely receive subsequent backlash, these hosting services should do more to notify customers by clarifying that websites hosted through them will not be available in Iran.

4.3. Civil Society

4.3.1. Advocacy

There are also several steps civil society should take. Civil society should continue imploring politicians to reform the sanctions regime. Advocacy has led to the easing and clarification of ICT sanctions in the past: Iranian political and civil society, concerned about Iranians and their Internet freedom, petitioned Congress, published articles, and spoke to think tanks.²³³ The National Iranian American

²³⁰ The report includes information about government requests to remove content and requests for information about Google users. Google, *Transparency Report*, <http://www.google.com/transparencyreport> (last visited Oct. 9, 2015).

²³¹ Pooria Asteraky, *Revealing a Hidden Story about GoDaddy's Hosting*, POORIAST (Jan. 26, 2013), <http://pooriast.wordpress.com/2013/01/26/revealing-a-hidden-story-about-godaddys-hosting>.

²³² GoDaddy, *Web Hosting*, <http://www.godaddy.com/hosting/web-hosting-new.aspx> (last visited Oct. 9, 2015).

²³³ Nat'l Iranian Am. Council, *Accomplishments*, <http://www.niacouncil.org/about-niac/accomplishments> (last visited May 5, 2015).

Council, for example, conducted campaigns against broad sanctions by publishing articles,²³⁴ issuing public letters,²³⁵ and conducting interviews.²³⁶ The organization successfully advocated for the lifting of sanctions that impeded the delivery of humanitarian goods and services.²³⁷ It also successfully advocated for lifting sanctions that restricted Iranian civilians' ability to communicate with one another and the outside world. Its campaigns led to the removal of sanctions on online communications tools like MSN Messenger, Facebook, and YouTube.²³⁸ They also led to the lifting of sanctions on communications technologies, including hardware like laptops and mobile phones, services like VPNs, and anti-malware software.²³⁹ Another group, International Campaign for Human Rights in Iran, has also tracked and disseminated information about ICT sanctions to put pressure on the U.S. government to reform its sanctions.²⁴⁰ Civil society can continue to facilitate progress in the sanctions regime by continuing to urge politicians to reform the regime.

²³⁴ Nat'l Iranian Am. Council, *Sanctions*, <http://www.niacouncil.org/tag/sanctions> (last visited Oct. 23, 2015).

²³⁵ *29 Organizations Warn Congress Against New Iran Sanctions*, NAT'L IRANIAN AM. COUNCIL (Nov. 19, 2013), <http://www.niacouncil.org/site/News2?page=NewsArticle&id=10061> (posting a letter from the National Iranian American Council and twenty-eight other organizations warning key Senate members against additional sanctions).

²³⁶ *Which Iran Will We Choose?*, HUFFINGTON POST (Dec. 23, 2013), <http://live.huffingtonpost.com/r/archive/segment/which-iran-will-we-choose/52b8825478c90a4ce600069d> (interviewing Reza Marashi, Research Director of the National Iranian American Council).

²³⁷ Jamal Abdi, *NIAC Applauds Easing of Humanitarian Sanctions on Iranians*, NAT'L IRANIAN AM. COUNCIL (Sept. 10, 2013), <http://www.niacouncil.org/niac-applauds-easing-of-humanitarian-sanctions-on-iranians>.

²³⁸ Phil Elwood, *NIAC Efforts to Reform Sanctions on Internet Tools for Iranians Successful*, NAT'L IRANIAN AM. COUNCIL (Dec. 16, 2009), <http://www.niacouncil.org/site/News2?page=NewsArticle&id=5961>.

²³⁹ Jamal Abdi, *NIAC Applauds Lifting of Communications Sanctions for Iranians*, NAT'L IRANIAN AM. COUNCIL (May 29, 2013), http://www.niacouncil.org/site/News2?page=NewsArticle&id=9263&security=1&news_iv_ctrl=1261.

²⁴⁰ See, e.g., *Crippling Sanctions*, INT'L CAMPAIGN FOR HUM. RTS. IN IRAN (Apr. 29, 2013), <http://www.iranhumanrights.org/2013/04/crippling-sanctions> (explaining the difficulties suffered by Iran because of sanctions imposed by the United States and the European Union).

4.3.2. Information Dissemination

Civil society should also continue disseminating information on the impact that sanctions are having on Iranians' access to ICT tools. Civil society plays an important role in informing and mobilizing civilians. Civil society should continue these efforts by publishing information on sanctions regulations and on ICT companies' practices within Iran. This would in turn encourage more people to join the cause in lobbying for reforms of the sanctions regime and in pressuring companies to react to existing opportunities within the sanctions regime.

Civil society should also incorporate sanctions-related rankings into existing ranking projects. A potential space for such rankings is the Ranking Digital Rights Index.²⁴¹ Rankings could also be added to reports like the Freedom House's Freedom on the Net report.²⁴² The ranking should evaluate companies on the extent to which their actions facilitate access to information in regards to sanctions regimes. With respect to Iran, this should include companies' willingness to act under General License D-1 and the breadth of their activities in Iran. This would be a simple way to inform the public of companies' activities in providing access to information and would consequently support public advocacy efforts to effectuate government and company policy change.

These recommendations, if implemented, would ensure that the sanctions regime both supports Iranians' freedoms and furthers U.S. foreign policy goals.

5. CONCLUSION

Although U.S. ICT sanctions against Iran have not had the intended effect of providing Iranians with access to ICT tools, implementation of the recommendations above would both improve Iranians' freedoms and further U.S. interests. The sanctions regime and the resulting responses by the ICT sector have so far had the unintended effect of limiting Iranians' freedoms and leaving them

²⁴¹ Rebecca MacKinnon, *Ranking Digital Rights*, RANKING DIGITAL RIGHTS, <http://rankingdigitalrights.org> (last visited Oct. 3, 2015).

²⁴² See, e.g., *Freedom on the Net*, FREEDOM HOUSE (2014), https://freedomhouse.org/sites/default/files/FOTN_2014_Full_Report_compressedv2_0.pdf (reporting on Internet freedom by country).

vulnerable to censorship and monitoring by the Iranian government. To remedy this, the U.S. government should further target sanctions, create more authorizations, ease financial restrictions, and increase information transparency. The government should follow the achievement of the JCPOA with reforms in the ICT space to achieve further progress. ICT companies should respond to sanctions reforms by taking advantage of the business opportunities to be gained from exporting their technologies to Iran in a human rights compliant manner. Furthermore, civil society should continue advocating for necessary reforms of the sanctions regime. These steps would have the result of providing Iranians with the ICT tools they need to access information, communicate, and mobilize.

Additionally, lessons learned from the sanctions regime against Iran should be applied across all sanctions regimes. The United States should follow these recommendations with respect to the exportation of ICT tools in other sanctioned countries. There have already been similar efforts at reform with respect to other countries as part of the United States' effort to support the free flow of information and communication worldwide. Since the 2010 General License was issued for Iran, Sudan, and Cuba, a similar policy has been applied to Syria.²⁴³ Also, OFAC has applied the approach it took with General License D to Sudan²⁴⁴ and Cuba.²⁴⁵ Most recently, there have been developments authorizing personal communications tools in the Crimea region of Ukraine to support information

²⁴³ General License No. 5 Related to Internet-Based Services was incorporated into 31 C.F.R. § 542 (2011) (permitting Internet-based personal communication services under the sanctions regime against Syria, provided that such services are publicly available at no cost to the user).

²⁴⁴ Sudanese Sanctions Regulations, 31 C.F.R. § 538 (2015) (licensing personal communications software, hardware, and services).

²⁴⁵ Definitions found in General License D closely resemble those found in the 2009 Commerce Department's Cuban Consumer Communications Devices exception. This exception was amended to eliminate the donation requirement in 2015. Cuba: Providing Support for the Cuban People, 80 Fed. Reg. 2286 (Jan. 16, 2015) (amending sanctions against Cuba to authorize the exportation of items intended to strengthen civil society and improve information flows, including the sale of certain communication tools). See also Danielle Kehl, *Increasing the Free Flow of Information to Cuba under U.S. Sanctions*, NEW AM. FOUND. (Jan. 22, 2015), <https://www.newamerica.org/oti/increasing-the-free-flow-of-information-to-cuba-under-us-sanctions> (identifying reforms in sanctions against Cuba as part of the U.S. government's broader efforts to reform comprehensive sanctions and support information flows).

flows.²⁴⁶ This trend should continue to be applied across the world and should be extended to fee-based ICT tools. Such reform would support civilians' access to information and freedom of expression, and it would enable civil society in sanctioned countries to organize and mobilize against repressive governments.

²⁴⁶ U.S. Dep't of Commerce, *Russian Sanctions: Revisions and Clarifications for Licensing Policy for the Crimea Region of Ukraine* (May 22, 2015) (amending the Export Administration Regulations to facilitate Internet-based communications with persons in the Crimea region of Ukraine); U.S. Dep't of Treas., *General License No. 9* (2015) (authorizing personal communication software that is not fee-based in the Crimea region of Ukraine). *See also* Danielle Kehl, *U.S. Government Authorizes the Export of Internet-based Communications Tools to Crimea*, NEW AM. FOUND. (May 26, 2015), <https://www.newamerica.org/oti/us-government-authorizes-the-export-of-internet-based-communications-tools-to-crimea> (recognizing the importance of the reform for the U.S. government's efforts in ensuring the free flow of information).