



LOCKOUT

How a New Wave of Trade Protectionism Is
Spreading through the World's Fastest-Growing
IT Markets — and What to Do about It



BSA[®]

BUSINESS SOFTWARE ALLIANCE

CONTENTS

Executive Summary	1
Confronting a New Generation of Market-Access Barriers	2
BARRIER ONE: Restrictions on Procurement by Government Agencies and State-Owned or State-Influenced Enterprises	4
CASE STUDY: Mandates for Procurement of Domestic Electronic Goods in India	4
CASE STUDY: Price Preferences for Procurement of Local Goods in Brazil	5
CASE STUDY: Central and State-Level Procurement Preferences in Indonesia	6
BARRIER TWO: Manipulation of Technology Standards	7
CASE STUDY: Restrictive Standards Policies and Practices in China	7
CASE STUDY: Unreasonable Terms for Standards-Essential Patents and Preferences for Indigenous Technology in India	8
BARRIER THREE: Overreaching Security-Related Regulations	9
CASE STUDY: Restrictions on the Procurement of Foreign IT Security Products in China	9
CASE STUDY: Burdensome Security Testing for IT Products in India	10
BARRIER FOUR: Regulatory Obstacles to Cloud Computing	10
CASE STUDY: Licensing Requirements Restricting Foreign Companies' Ability to Offer Cloud Services in China	11
CASE STUDY: Restrictions on Cross-Border Data Flows & Location Requirements for Data Centers in Indonesia and Vietnam	12
BARRIER FIVE: Persistent Tariffs	14
BSA Policy Recommendations	15
About BSA	18
Endnotes	20

Executive Summary

Many of the world's largest and fastest-growing emerging markets are erecting new trade barriers that discriminate against foreign information technology (IT) products and services. More troubling, these barriers — in China, India, Brazil, and elsewhere — are having a contagion effect, emboldening other emerging markets to impose protectionist measures of their own. The global scope of the problem poses immediate and long-term threats to the IT industry and the broader global economy. These threats cannot be overstated or ignored. Leading IT economies should press a concerted bilateral, multilateral, and regional effort to combat discriminatory trade barriers where they already exist and eradicate them before they spread further.

The IT industry is a critical driver of economic and job growth. Any barriers to IT sales and exports in major emerging markets therefore undermine the ability of IT firms to contribute to the global economy. Moreover, while many of the barriers erected by emerging markets are aimed at bolstering the growth of domestic IT sectors and these countries' economies more generally, protectionism can backfire over the long term. Denying these markets access to foreign goods, services, and investment that can be a catalyst to economic growth and innovation can impede the very goal these countries are trying to achieve.

The new generation of market-access barriers cropping up in emerging markets are numerous and not always as easy to identify as traditional trade barriers. That also makes it difficult to challenge them with traditional trade remedies alone.

Some of the major impediments that IT companies face — such as poor intellectual property (IP) protection and enforcement, and severe limitations on investment in new operations — plague other industry sectors, too. This report focuses on several categories of barriers that particularly hamper market access for IT goods and services, including:

1. **Restrictions on procurement by government agencies and state-owned or state-influenced enterprises.** These include mandates or preferences for domestically owned or produced products, for products utilizing a particular technology or business model, or for products whose intellectual property is owned or developed locally.
2. **Manipulation of technology standards** to bolster domestic firms and insulate them from foreign competition.
3. **Security-related regulations that limit market access for foreign information security and other IT products** by mandating the use of local products or imposing unreasonable testing or certification requirements.
4. **Regulatory obstacles to cloud computing** that unduly burden or discriminate against foreign firms by, for example, requiring suppliers offering cloud services to locate data centers in-country or by significantly restricting cross-border data flows.
5. **Tariff barriers** that persist because many key emerging markets have not joined the Information Technology Agreement (ITA), and the agreement does not cover important new categories of software and hardware.

The US, Europe, and other governments should urgently elevate these market-access concerns in bilateral, multilateral, and regional trade discussions. Eliminating IT-focused barriers will require updating World Trade Organization (WTO) frameworks, taking appropriate measures in new trade agreements such as the Trans-Pacific Partnership (TPP), and marshaling support for open markets in regional dialogues such as the Asia-Pacific Economic Cooperation (APEC) forum. In addition to employing current trade tools where appropriate, trade officials also should consider where robust new tools may be needed.

BSA offers the following action plan:

- ➔ **Press trading partners to adopt transparent, nondiscriminatory government procurement policies.**
- ➔ **Ensure that commercial procurement by state-owned or state-influenced enterprises is undertaken without government intrusion.**
- ➔ **Use trade agreements to establish rules that promote market-led technology standards.**
- ➔ **Establish clear rules allowing data to flow across international borders.**
- ➔ **Advocate for strengthened IP protection and enforcement, and oppose market-access restrictions based on the location of IP ownership or development.**
- ➔ **Enforce existing trade commitments and ensure that new trade agreements address IT barriers.**
- ➔ **Expand the WTO's Information Technology Agreement.**
- ➔ **Intensify bilateral engagement to promote best practices that spur innovation.**

Confronting a New Generation of Market-Access Barriers

As emerging markets become increasingly prosperous, their demand for IT products and services is expanding rapidly. New personal computer sales in China already outstrip sales in the United States, for example,¹ and Brazil recently became the third-largest market for PCs, overtaking Japan.² In fact, the four so-called BRIC countries (Brazil, Russia, India, and China) now account for a quarter of all new PC sales globally, up from less than one-sixth in 2006.³

This trend shows no signs of diminishing — and it should be good news for the innovative IT industry and the millions of high-wage jobs it supports, since the industry has long looked for global growth opportunities. But the unsettling reality is technology companies are increasingly faced with a new generation of trade barriers in emerging economies. While some tariff barriers remain, most take the form of in-country, “behind-the-border” regulations and requirements. They often are couched as policies to promote innovation, enhance security, or advance other domestic priorities, so they might not on the surface appear to be targeted at foreign suppliers or trade. As such, they can be far more difficult to challenge using traditional WTO rules or trade remedies.

The driving forces behind these market-access barriers are varied:

- ➔ Policymakers in emerging markets are seeking to transition their economies away from traditional manufacturing and agriculture to higher-value, innovation-based industries but are following the mistaken belief that insulating domestic suppliers from foreign competition is a viable means to achieve this.
- ➔ Governments in many emerging markets recognize that these “behind-the-border” barriers can be more difficult to challenge under existing trade rules and disciplines.
- ➔ State-controlled entities play a significant role in the economies of many emerging markets, and governments seek to protect them or use them to achieve political and policy goals.
- ➔ Governments in these markets are emulating the practices of China and other key competitors in order to support and defend their own industries, creating a contagion effect that amplifies the global scope of the problem and heightens the urgency of addressing these barriers before they further proliferate.

“These barriers often are couched as policies to promote innovation, enhance security, or advance other domestic priorities, so they might not on the surface appear to be targeted at foreign suppliers or trade.”

The impact of these barriers on the global IT industry is serious and growing. They exclude multinational suppliers or impose costs on them that competing domestic suppliers do not have to bear. This effectively makes products from multinational firms uncompetitive.

1

BARRIER ONE: Restrictions on Procurement by Government Agencies and State-Owned or State- Influenced Enterprises

Given the size and importance of procurement by government agencies and state-owned or state-influenced entities, securing fair and open access to these markets in emerging economies is a high priority for IT suppliers. Measures that exclude multinational suppliers from access to government procurement and procurement by a broad array of state-controlled or state-influenced enterprises translate into high levels of lost exports and jobs. They also deprive governments and other purchasers in emerging markets the ability to choose the best available IT products and services at the best prices.⁴

In many countries, governments are the single largest purchasers of IT products. Combined public sector spending on information and communications technologies worldwide in 2010 was estimated at \$423 billion.⁵ In emerging economies in particular, governments tend to be disproportionately large purchasers of IT because of the government's deeper involvement in the economy and because governments in these markets are often relatively more intensive IT users.

Notably, no major emerging markets are members of the WTO Government Procurement Agreement (GPA), the core international agreement imposing trade rules on government procurement practices. A few, including China, India, and Turkey, have indicated intent to join the GPA and have begun negotiations or are designated "observers" to the agreement. China pledged to negotiate accession to the GPA "as soon as possible" when it joined the WTO in 2001, yet the negotiations continue.⁶



CASE STUDY

Mandates for Procurement of Domestic Electronic Goods in India

In February 2012, the Indian government issued a notification implementing procurement mandates for domestically manufactured electronic goods. Under this policy, at least 30 percent of procurements are set aside for domestically manufactured products, which are defined as products with a specified percentage of domestic value-add (starting at 25 percent in the first year and increasing to 45 percent after five years). These preferences apply to procurement by government agencies and to procurement by government-licensed entities such as telecommunications service providers and financial services firms. While the full scope of this policy is still unclear, particularly the extent to which it applies to private entities, it represents a highly restrictive policy that could be expanded to a broader range of IT products and services.

The procurement policy for domestically manufactured electronic goods follows the release by the Ministry of ICT in October 2011 of three draft interrelated national policy initiatives — the National IT Policy, National Telecom Policy, and National Electronics Policy — to promote the development of ICT industries in India. While these policies seek the laudable goal of enhancing India's ICT sectors, they set a framework for enacting measures to exclude foreign suppliers or impose burdensome requirements on them.



CASE STUDY

Price Preferences for Procurement of Local Goods in Brazil

In late 2010, the Brazilian government enacted a law that imposed sweeping new government procurement preferences for local products.

Law 12.349/2010 gives preference in public tenders to bidders that offer goods and services that are produced in Brazil and are fully compliant with Brazilian technical standards and regulations. The extent of the preference depends on the industry and has yet to be specified by regulation for many IT products, but the law allows a preference margin of up to 25 percent of the price of foreign-origin products and services. The preference may be adjusted depending on studies that establish criteria for how best to generate jobs and innovation in Brazil. In addition, the law allows for procurement of “strategic” ICT goods and services to be restricted to those with indigenously developed technology.

There is broad international consensus that governments benefit by keeping their procurement markets as open as possible. For instance, under the umbrella of APEC negotiations, leaders of Asia-Pacific economies recently agreed to “[p]romote government procurement policies that are transparent, nondiscriminatory, openly pro-competitive, and performance-based, consistent with the APEC Non-Binding Principles on Government Procurement.”⁷ Similar commitments to open procurement exist in US law, the laws of the European Union (EU) and its member states, and many other countries.

Increasingly, however, governments in emerging economies are manipulating their procurement rules to exclude foreign products and suppliers. In China, for instance, the government has introduced a broad array of “indigenous innovation” policies at various levels of government (central, provincial, and municipal). One path the Chinese government has pursued is to develop catalogs of products to receive preferential treatment, which excludes products that contain IP developed or owned by a foreign entity. Although Chinese leaders have committed in recent bilateral negotiations with the United States to “delink” government procurement from these “innovation” policies,⁸ multinational IT suppliers

continue to confront this form of discrimination by government agencies at all levels.

Likewise, India and Brazil have recently taken steps to extend extensive procurement preferences to domestic products and suppliers. Indonesia grants procurement preferences designed to maximize the use of local content and encourage domestic sourcing of supplies.

In addition, some emerging markets have pursued measures to mandate or provide significant preferences for procurement of particular technologies. For example, the Brazilian government has pursued numerous efforts over the past decade to enact preferences at the federal, state, and local government levels for the procurement of open-source software over commercial products.⁹ Most recently, in December 2011, two Brazilian legislative committees approved draft Law PL 2269/1999, which would require all Brazilian federal government agencies and state-backed companies to favor open-source software in their procurement policies. This legislation is pending further action in the Brazilian Congress. In India, the Department of Higher Education recently circulated a draft information and communications technology (ICT) policy that includes a strong preference for the open-source software licensing model.



CASE STUDY

Central and State-Level Procurement Preferences in Indonesia

Indonesia has issued a series of policies aimed at maximizing procurement of local products for both central- and state-level government entities. Presidential Regulation 54/2010 calls for procuring entities to maximize local content in procurement, use foreign components only when necessary, and designate foreign contractors as subcontractors to local companies. Presidential Regulation 2/2009 calls on state administrations to optimize the use of domestic goods and services and give price preferences for domestic goods and providers. Ministry of Industry Decree (15/2011) establishes an Accelerated Use of Local Product National Team to optimize procurement of local goods and services.

Software today often contains a mix of open-source and proprietary elements. Efforts by governments to prescribe one model over another for procurement undermine competition in the marketplace and restrict the ability of government purchasers to procure the best products to meet their needs.

In the United States, the White House recently reaffirmed its policy of technology neutrality in IT procurement.¹⁰ Similarly, the EU's public procurement law contains an obligation that procurement be nondiscriminatory.¹¹ Multilateral organizations have taken similar approaches. Under the APEC

Technology Principles, member countries have agreed to "promote technology neutral policies and regulations ... that will allow flexibility in the choice of technologies in order to ensure competition, maximize benefits for governments, businesses, and consumers, and bridge the development gap."¹²

A related and troubling development is the expansion of government procurement restrictions beyond purchases made by government agencies. Many of China's procurement preferences appear to cover procurement by state-owned enterprises, a massive sector in China. This is inconsistent with China's efforts to join the GPA and with its existing WTO commitment that the government "would not influence, directly or indirectly, commercial decisions on the part of state-owned or state-invested enterprises, including the quantity, value or country of origin of any goods purchased or sold..."¹³ A new directive in India providing preferences for the procurement of domestically manufactured electronic goods would apply beyond government agencies to procurement by state-licensed entities such as telecommunications service providers.

“A troubling development is the expansion of government procurement restrictions beyond purchases made by government agencies.”

2

BARRIER TWO: Manipulation of Technology Standards

Technology standards play a vital role in facilitating global trade in IT products and services. Internationally recognized and adopted technical standards that are established with industry participation and accepted across markets generate efficiencies and speed the development and distribution of new products and services, allowing consumers to get them faster and at lower cost. Government intrusion into and manipulation of standards-setting processes hampers innovation and creates artificial barriers to trade.

IT companies invest substantial resources to develop and support technology standards that can be used globally and to make them available for licensing on fair, reasonable, and nondiscriminatory (FRAND) terms to companies large and small, regardless of nationality. This process has generated enormous benefits for consumers. Not only has it spurred technology innovation, but experience has shown that standards are most successful when developed in market-led, voluntary, and consensus-based processes. Discriminatory government-mandated standards, by contrast, tend to “freeze” innovation and force consumers and businesses into using products that might not suit their needs.

It is widely recognized that the market should lead in developing and adopting technology standards. For instance, APEC leaders recently agreed to



CASE STUDY

Restrictive Standards Policies and Practices in China

In 2005, China articulated a National Standards Policy to modernize its standards regime. As a result of this policy and further regulations issued in January 2010 (the Disposal Rules for Inclusion of Patents in National Standards), China’s Standardization Administration gained authority over a number of Chinese standards development organizations (SDOs). Although the regulations state that, in principle, foreign firms are allowed to participate fully in such committees, there have been reports of SDOs excluding foreign firms from meetings or preventing them from participating in meaningful ways, which in some cases has led to the “capture” of Chinese standards by Chinese domestic firms. Moreover, in order to participate in standard-setting, foreign firms may be required to disclose confidential and proprietary information, including patented technologies, without assurances that such information will be protected.

For example, the Ministry of Industry and Information Technology is developing standards for software asset management, which already has an International Organization for Standardization (ISO) standard. Foreign companies, which have a wealth of information on global software asset management practices, cannot fully participate in this standard development process.

In addition, China’s Standardization Administration does not recognize standards developed by highly reputable, industry-led SDOs such as the Internet Engineering Task Force (IETF) and the World Wide Web Consortium (W3C). Instead, it recognizes standards only if they are developed by China’s standard-setting committees or a select few others.



CASE STUDY

Unreasonable Terms for Standards-Essential Patents and Preferences for Indigenous Technology in India

In November 2010, the Indian government announced a policy on open standards for e-governance. The goal of the policy is for standards-essential patents to be made available on a royalty-free basis rather than on fair, reasonable, and nondiscriminatory terms (FRAND). This denies patent holders suitable compensation for their intellectual property and dissuades them from participating in standard-setting processes.

Separately, India's Draft National Telecom Policy takes steps to promote new Indian standards for use in the telecommunications industry. It calls for the establishment of a new Telecommunications Standard Development Organization to aid the development of new Indian standards and promote the use of Indian standards internationally. The Draft Telecom Policy encourages the use of local standards to protect national security and specifically promotes Indian-origin SIM cards that are designed to incorporate Indian standards.

"[e]ncourage the use and participation in the development of voluntary, market-led, and global standards that promote innovation, competition, and create global markets for products and services."¹⁴ Similarly, a recent United Nations report on e-government endorsed the principles of standards choice and technology neutrality and warned of the dangers of government mandates: "Mandating a particular technology [standard] will not only prevent government from using the latest and the best but also consign it to using older and perhaps outmoded standards."¹⁵ Most leading economies have adopted policies that are consistent with these principles.

Despite this consensus, some governments have manipulated standard-setting processes in an effort to bolster domestic firms and insulate them from foreign competition.

In China, for instance, regulators have pressed domestic standards development organizations (SDOs) to adopt standards put forward by domestic firms or that implement patented technologies owned by these firms over more widely adopted international

standards. As part of its "indigenous innovation" efforts, China has adopted or sought to develop unique Chinese standards in areas including Internet protocols, 3G telecommunications services, wireless local area networks, digital audio and video, radio frequency identification technology, and encryption.

Chinese SDOs also may restrict meaningful foreign participation, which can make it difficult for non-Chinese entities to influence standards development or protect their patents. Separately, China's rules for testing and certifying compliance with standards are often discriminatory and unduly burdensome and provide inadequate protections for confidential commercial information (including software source code) and intellectual property rights. Likewise, India has adopted policies that favor domestic standards and technologies and discourage compensating patent holders for technologies that are essential to standards.

3

BARRIER THREE: Overreaching Security- Related Regulations

Under the guise of protecting national security, implementing stronger cyber-security measures, or otherwise improving “security,” emerging-market governments are imposing measures that often stray far into the commercial sphere. These include procurement restrictions or unreasonable testing and certification requirements. These measures and others create barriers for foreign IT products and deny local consumers and businesses access to the best security solutions to meet their needs. In some instances, these measures actually undermine security.

For example, China’s Multi-Level Protection Scheme (MLPS) mandates that only Chinese-owned information security and other IT products with core

“Under the guise of improving ‘security,’ emerging-market governments are imposing measures that often stray far into the commercial sphere.”

IP that is Chinese-owned can be used in a broad array of information systems. The Indian government imposes costly and burdensome in-country testing and certification requirements on products procured by telecommunications service providers. Russia has licensing requirements for imports of products with encryption technology that has the effect of delaying and impeding imports.



CASE STUDY

Restrictions on the Procurement of Foreign IT Security Products in China

IT suppliers face a significant security-related market barrier in China’s Multi-Level Protection Scheme (MLPS), which classifies information networks in China based on their relative importance to national security, social order, and economic interests. Any information system classified as level three or higher on a scale of one to five is subject to certain restrictions that have the effect of excluding foreign technologies and firms.

For example, only companies owned by Chinese citizens are allowed to supply IT security products for these systems, and the core technology and key components of the products must contain domestic IP.

Because of the broad and nonspecific language used to describe the different classification levels, most of China’s large state-owned enterprises and government agencies in the areas of finance, transportation, telecommunications, health, education, and other areas not directly related to security are classified at level three or higher. China’s Ministry of Public Security began sending out inspectors in summer 2010 to identify violators. The inspection campaign aims to achieve “full compliance” among systems classified at level three or above by 2012. To satisfy the MLPS requirements, many state-owned enterprises that once procured foreign IT security products have switched to domestic products.



CASE STUDY

Burdensome Security Testing for IT Products in India

In December 2009, India's Department of Telecommunications issued a series of new requirements for telecommunications service providers (TSPs) that would have required hardware and software vendors to transfer technology and escrow source code and other sensitive design elements with the TSPs. These requirements, which were announced as a means of improving the security of India's commercial telecom networks, applied only to imported products. The policy eventually was amended, but it still imposes burdensome requirements.

Beginning April 1, 2013, all network "elements" must be tested and certified by authorized laboratories in India. That will preclude companies from utilizing long-established, internationally accredited laboratories in other countries. The in-country testing and certification is required even though there is no evidence that where the test is performed has any bearing on its accuracy as long as the laboratory has achieved appropriate accreditation.

The new requirements also have a mandatory facility inspection provision: The TSP must ensure that it, the Department of Telecommunications, or other designated agencies are allowed to inspect vendors' "hardware, software, design, development, manufacturing facility, and supply chain" and "subject all software to a security/threat check" at any time while the vendor is supplying equipment to the TSP. These new inspection requirements will impose a barrier on foreign IT companies' ability to sell to Indian telecommunications operators because most of the foreign suppliers' facilities are located outside India, making compliance more costly and cumbersome than for their in-country competitors.

4

BARRIER FOUR: Regulatory Obstacles to Cloud Computing

Cloud computing offers many potential economic benefits. Via the cloud, small- and mid-sized organizations can access powerful computing resources once available only to the largest companies without having to make significant upfront investments in IT installation, maintenance, and support. Because many cloud service models charge on a "pay-as-you-go" basis, the cloud also enables organizations to scale usage up and down as needed. In these and other ways, the cloud can help reduce IT costs and be a powerful productivity enhancer for enterprises in all

countries. But to fully seize the economic opportunity that cloud computing offers, it is critical to remove regulatory obstacles sprouting up in many key markets.

A recent study found that IT innovations enabled by the cloud could generate increased business revenue of \$1.1 trillion a year by 2015 and that spending on public and private IT cloud services would generate nearly 14 million jobs worldwide from 2011 to 2015.¹⁶ Notably, more than 50 percent of the new jobs created would be for small- and medium-sized businesses. Job growth linked to cloud computing will be spread globally, with nearly 1.2 million jobs created in the United States and Canada and 6.75 million jobs in China and India by the end of 2015.



CASE STUDY

Licensing Requirements Restricting Foreign Companies' Ability to Offer Cloud Services in China

In China, entities wishing to provide value-added telecommunication services ("VATS") are required to have a VATS license. A particular type of VATS license, known as an ICP license, is required to provide commercial Internet content services, including any Web- or cloud-based content services.

VATS licenses are subject to strict regulation and approval by the Ministry of Industry and Information Technology (MIIT) and several other government authorities. With the exception of a specific type of joint venture known as a foreign invested telecommunications enterprise (FITE), foreign invested companies are not eligible to apply for a VATS license (including an ICP license). Because of the strict regulatory requirements for FITEs — for example, foreign investment in the FITE must not exceed 50 percent of the enterprise's equity interest, the registered capital must be at least RMB 10 million (\$1.6 million) if the FITE will engage in nationwide or interprovincial services, and the foreign investor must prove that it has successful experience in providing value-added telecommunication services in the relevant field — it is difficult to obtain approval from MIIT to establish a FITE. Moreover, MIIT has specified that the places and facilities necessary to operate the services must be "installed within the coverage scope as prescribed by the Business License," which is generally understood to mean that any servers and data centers used to support cloud services must be located in China. MIIT has reportedly not issued a single ICP license to a foreign enterprise in the past two to three years.

The VATS/ICP requirements have forced foreign companies to consider less attractive and often unworkable alternatives. For example, some foreign cloud providers are entering into licensing arrangements under which the foreign company provides Web services in China through a contractual licensing relationship with a local agent that already holds an ICP license. This licensing model has inherent IP risks, because the foreign company may need to transfer sensitive IP to the Chinese company while having little control over the management and operation of the Web services provided by the local company. Furthermore, cross-border technology license arrangements are subject to the requirements of China's Technology Import and Export Regulations. Under these regulations, the foreign company must guarantee that the licensed technology is complete, accurate, effective, and capable of achieving the agreed technical objectives, and the foreign company is obliged to defend and indemnify the Chinese party against any claim that the technology infringes third-party rights. Meanwhile, because the foreign party is prohibited from placing restrictions upon the Chinese party regarding improvements to the technology, the Chinese party is free to develop derivative works based on the licensed technology and claim the derivative works as its own.

Many governments, recognizing the potential economic opportunity, are reviewing their regulatory regimes to ensure they are cloud-ready and are working to eliminate rules that unnecessarily impede cloud services. In the United States, for example, the Federal government's Chief Information Officer released a *Federal Cloud Computing Strategy* in 2011. That effort includes a "Cloud First" approach intended to promote the use of cloud technologies.¹⁷

Rules restricting the free flow of data undermine the cloud computing model. While clouds can be located on premises or contained within a given jurisdiction, cloud computing often involves the storage and processing of data in multiple locations and even in multiple countries. Indeed, many of cloud computing's primary advantages — such as reliability, resiliency, economies of scale, and 24-hour service support — can require that data be stored in multiple markets. Confining data within a given country inhibits the ability of cloud service providers to offer these benefits.

While efforts are under way in the EU and other markets to ease the flow of data among jurisdictions, some governments have taken a different path.¹⁸ For example, China, Indonesia, Vietnam, Brazil, Argentina, Chile, Colombia, Peru, and Costa Rica all have adopted or proposed rules that prohibit or significantly restrict companies from transferring personal information out of the domestic territory. In parallel, many markets are beginning to require that data centers be located inside their geographic borders.

Policies that unnecessarily restrict the free flow of data prevent domestic and foreign cloud service providers alike from hosting data in third countries. But such policies often have a disproportionate impact on foreign cloud providers, whose primary data centers are more likely to be located outside of a given country. At a minimum, foreign providers may mirror data on servers in other jurisdictions as backup in case a domestic datacenter or national network fails.



CASE STUDY

Restrictions on Cross-Border Data Flows & Location Requirements for Data Centers in Indonesia and Vietnam

Laws and regulations under consideration in Indonesia and Vietnam are illustrative of efforts under way in many global markets to require in-country data centers and place other restrictions on cross-border data flows.

In Indonesia, the Law on Information and Electronic Transactions (ITE Law, 11/2008) provides regulation of a general nature concerning electronic transactions. It does not specifically relate to, or facilitate, the provision of cloud computing services. In August 2011, the Indonesian government issued a draft amendment that would require data service providers to establish local representation in Indonesia, including local data centers. It follows that cloud services providers would be required to establish in-country cloud data centers.

In Vietnam, the Ministry of Information and Communication is preparing a decree expected to be submitted soon to the prime minister that would impose a number of new licensing and registration requirements on IT services. Under the current draft decree, providers of data center and cloud computing services would face significant restrictions on the cross-border supply of services and would be required to locate entire equipment systems used for providing such services in the country.

In some markets, licensing rules have created significant obstacles to the entry of foreign cloud providers. For example, because appropriate licenses are available to foreign firms only in certain narrow circumstances, the cloud market in China is largely closed to foreign competition.

Subpar privacy rules also have created an obstacle to market access for cloud providers. Users will migrate to the cloud only if they have confidence that their data will be safe there. Accordingly, national privacy regimes should be predictable and transparent and should avoid unnecessarily burdensome restrictions on cloud service providers such as registration requirements for data controllers and cross-border data transfers. Cloud providers should be encouraged to establish privacy policies that are appropriate for the particular cloud service they provide and the business model they use. Key emerging markets for cloud services, including China, India, Indonesia, Thailand, and Turkey, do not yet have adequate data-protection laws in place.

BSA recently released its Global Cloud Computing Scorecard, a comprehensive assessment of the cloud “readiness” of 24 global markets. The Scorecard analyzes and ranks these markets on the basis of their laws and regulations in seven areas: data privacy, cyber-security, cyber-crime, intellectual property, technology interoperability and legal harmonization, free trade, and IT infrastructure.¹⁹

A key finding of the Scorecard is that a sharp divide in cloud readiness exists between advanced economies and emerging markets. Japan, the United States, and the EU all have established solid legal and regulatory bases to support the growth of cloud computing. Important emerging economies, such as China, India, and Brazil, have the most work to do to integrate themselves into the global cloud market.

“Policies that unnecessarily restrict the free flow of data prevent domestic and foreign cloud service providers alike from hosting data in third countries.”

The Scorecard proposes a seven-point policy blueprint for governments around the world to expand economic opportunity in the cloud:

1. Protect users’ privacy while enabling the free flow of data and commerce.
2. Promote cutting-edge cyber-security practices without requiring the use of specific technologies.
3. Battle cyber-crime with meaningful deterrence and clear causes of action against criminals.
4. Provide robust protection and vigorous enforcement against misappropriation and infringement of cloud technologies.
5. Encourage openness and interoperability between cloud providers and solutions.
6. Promote free trade by lowering barriers and eliminating preferences for particular products or companies.
7. Provide incentives for the private sector to invest in broadband infrastructure, and promote universal access to it among citizens.

It is critical for the growth of cloud computing that the elements of this blueprint be aggressively championed in multilateral forums and through engagement with major emerging markets.



BARRIER FIVE: Persistent Tariffs

The multilateral Information Technology Agreement (ITA), launched in 1996 under the auspices of the WTO, has had an enormous impact on removing tariff barriers to global trade in IT products. The signatory countries to the ITA agreed to lower tariff barriers on a wide array of IT products. According to a recent report, implementation of the ITA was a key driver in the expansion of global trade in information and communications technology products from \$1.2 trillion in 1996 to \$4 trillion in 2008.²⁰

The ITA, however, has not kept pace with IT product development. In the years since the ITA was inaugurated, global IT companies have come out with a broad array of products that are not covered under the agreement, including new types of semiconductor chips, IT-enabled medical devices, and such computer accessories as monitors and speakers, DVD players, and video game consoles. By not keeping pace with technological developments, the ITA does not cover many products that are vital to the business plans of IT companies today. By some estimates, an expanded ITA could remove tariffs on \$800 billion or more of global information and communications technology trade.²¹

Moreover, while today there are 73 signatory countries to the ITA, several important economies are not members, including Brazil, Chile, and Russia (which is not yet part of the WTO, but is expected to join soon). The lack of participation in the ITA by these critical emerging markets for IT products is

“The Information Technology Agreement (ITA) has not kept pace with IT product development.”

significantly hampering the ability of global companies to sell IT products there and closing off consumers in these countries to products that can enhance their productivity and well-being.

Notably, at the 2011 APEC Leaders' Meeting, the Leaders' Declaration included a call for APEC to “[p]lay a leadership role in launching negotiations to expand the product coverage and membership of the WTO Information Technology Agreement, in order to build on the contribution this Agreement has made to promoting trade and investment and driving innovation in APEC economies.”²² It is welcome news that the WTO recently announced several parties to the ITA, including the United States, would be starting informal consultations to expand the agreement.



BSA Policy Recommendations

IT companies face significant and growing market-access challenges in selling their products in the world's fastest-growing emerging markets. These include weak protection of intellectual property, restrictions on investment and establishing local operations, and an increasing array of policies that discriminate in particular against foreign IT products.

Leading IT economies should make these IT-focused barriers centerpiece agenda items in bilateral, multilateral, and regional trade discussions. That should include updating WTO frameworks to address these issues and pursuing them in trade agreements such as the Trans-Pacific Partnership (TPP) and regional forums such as APEC. In addition, the US and other governments should employ current trade tools where appropriate and assess whether additional tools are needed to effectively address these challenges.

BSA offers the following action plan:

- ➔ **Press trading partners to adopt transparent, nondiscriminatory government procurement policies.** As major purchasers of IT goods and services, governments have a significant impact on the marketplace. It is therefore critical that they select products based on their relative merits, not the ownership of their underlying intellectual property, the origins or nationalities of their suppliers, or the particular technologies they use. Procurement on these terms would benefit both multinational IT companies seeking access to these markets and governments in these markets that would be able to procure the best products to meet their needs. The WTO's Government Procurement Agreement imposes important requirements on parties to open their government procurement but does not cover China, Brazil, India, Indonesia, and other countries with the most significant and growing procurement markets. Renewed efforts should be made to have these countries join the GPA and to do so on terms consistent with other members. Strong provisions on government procurement also should be addressed in regional forums such as APEC and incorporated into new trade agreements such as the TPP.

→ **Ensure that commercial procurement by state-owned or state-influenced enterprises is undertaken without government intrusion.**

Too often, governments in emerging markets use their control or influence over enterprises that are commercial actors to direct their purchasing decisions in favor of domestic products. Besides shutting out foreign IT products from this large segment of the commercial marketplace, this practice denies purchasing enterprises the opportunity to choose products that can maximize their productivity. Efforts should be pursued in all relevant forums, including the WTO, bilateral, and multilateral trade agreements and in APEC and other regional forums, to clarify and ensure that commercial procurements by state-owned and state-influenced entities are undertaken without government intrusion.

→ **Use trade agreements to establish rules that promote market-led technology standards.**

The market-led, consensus-based process for the development and use of technical standards followed in the United States and other leading economies is a success. It fosters innovation and trade, and it gives consumers access to better products at lower cost. There should be clear disciplines in trade agreements that require transparency and adequate opportunity for stakeholder participation in the standards development process. Governments should insist on trade provisions that prevent trading partners from manipulating standards to block foreign competition or protect domestic industry sectors.

→ **Establish clear rules allowing data to flow across international borders.** The cloud transcends national borders. The IT industry — and cloud computing in particular — will reach its full potential only if companies can invest freely abroad and can easily transfer data among jurisdictions. Governments around the world should press for global trade rules to prevent barriers to the provision of cloud services, such as unnecessary restrictions on cross-border data flows.

→ **Advocate for strengthened intellectual property protection and enforcement, and oppose market-access restrictions based on the location of IP ownership or development.** Innovation leadership is built on a foundation of robust IP protection. High rates of software and hardware piracy and counterfeiting are all too common in most major emerging economies, but now we are seeing measures that make local development or ownership of IP rights a condition of eligibility for access to government procurement or other parts of the market. In addition to strongly advocating for improved laws to protect and enforce IP in emerging markets, governments should oppose policies that make local development or ownership of IP a condition for market access, in law or in practice. This will promote job growth and trade on all sides.

→ **Enforce existing trade commitments and ensure that new trade agreements address IT barriers.**

Some of the new market-access barriers, while novel, do not require new tools to combat; the WTO and other agreements provide remedies. Governments should not hesitate to use these and any other tools at their disposal to challenge IT protectionism. Additionally, governments should seize all available bilateral and multilateral opportunities to press for new trade disciplines that effectively address these next-generation market-access barriers.

→ **Advocate for expansion of the Information Technology Agreement.** The ITA has provided enormous benefits to the global economy by reducing tariff barriers in many developed and emerging markets. With the rapid growth of new technologies and IT products, the ITA is in dire need of updating, both to cover a broad range of additional hardware, software, and other IT products and to cover some major emerging markets that are not currently members of the agreement, such as Brazil and Russia (once it formally joins the WTO). Current members of the ITA should lead an effort to expand both the product and country coverage of the agreement.

→ **Intensify bilateral engagement with key trading partners to promote best practices that spur innovation.** This should include discussion of the fundamental building blocks for an innovative ecosystem, including appropriate, non-distortive policies to support technology sector growth. For example, the US government has dialogues like this underway with some countries, such as China, providing a model to build on. The IT industry can play an important role in this process.

About BSA

The Business Software Alliance (BSA) is the leading advocate for the global software industry before governments and in the international marketplace. It is an association of world-class companies that invest billions of dollars annually to create software solutions that spark the economy and improve modern life.

BSA serves as the world's premier anti-piracy organization and as a respected leader in shaping public policies that promote technology innovation and drive economic growth.

Through government relations, intellectual property enforcement, and educational activities in markets around the world, BSA protects intellectual property and fosters innovation; works to open markets and ensure fair competition; and builds trust and confidence in information technology for consumers, businesses, and governments alike.

Protecting Intellectual Property & Fostering Innovation

Intellectual property rights (IPR) — copyrights, patents, and trademarks — provide the legal framework for creative enterprise, the bedrock of growing economies. They are also essential to commercial software development, which is the world's largest copyright industry.

By working with policymakers, leading enforcement actions, and conducting public-education initiatives around the world, BSA ensures that respect for IPR pervades the global economy and society.

- ➔ **Championing Intellectual Property Rights:** BSA works with governments around the world to ensure intellectual property protections keep pace with new innovations in technology, such as cloud computing.
- ➔ **Curbing Software Theft:** BSA conducts vigorous enforcement programs in approximately 50 countries, helping its members guard against software theft by taking legal action against commercial, end-user license infringement, counterfeiting operations, and Internet piracy.
- ➔ **Leading Industry Research:** BSA publishes the most authoritative global studies on piracy and its economic impact, illuminating the scope of the problem and helping shape national and international policy responses.
- ➔ **Educating the Public:** BSA educates consumers about harms associated with software piracy and offers a groundbreaking training program to help organizations more effectively manage their software assets.

Opening Markets & Ensuring Fair Competition

Open markets are essential to economic growth and prosperity. BSA expands market opportunities for the software industry by working with governments to break down trade barriers and eliminate discriminatory procurement preferences that stifle innovation by skewing competition.

- ➔ **Breaking Down Barriers to Growth:** BSA provides policymakers with information, expert analysis and industry insights to promote an open-market agenda. These efforts include a special focus on the so-called 'BRIC' economies of Brazil, Russia, India and China, which are the world's fastest-growing technology markets but also home to rampant piracy.
- ➔ **Promoting Technology Neutrality:** BSA encourages fair competition among technologies by promoting internationally recognized standards and unbiased IT-procurement policies for governments.
- ➔ **Supporting New Innovations:** BSA works with policymakers around the world to create conditions for new technologies such as cloud computing to flourish. In addition to collaborating on technology standards, this work involves elevating intellectual property protections, harmonizing international legal principles, and addressing other challenges that are beyond the capability or jurisdiction of any one company or government.

Building Trust & Confidence in Technology

Security and privacy undergird trust and confidence in information technology for consumers, businesses and governments. BSA promotes responsible data stewardship and facilitates acceptance and adoption of each new wave of innovation that transforms the technology marketplace and creates value for society.

- ➔ **Driving Public-Private Collaboration:** Drawing on the expertise of its members and productive working relationships with public officials, BSA serves as a knowledge center and catalyst to encourage cooperation and forge consensus among industry and governments.
- ➔ **Protecting Consumers:** As new technologies emerge, such as cloud computing, BSA and its members develop appropriate privacy and security standards and share their insights with policymakers and regulators.
- ➔ **Mapping Policy Solutions:** BSA has developed a global cybersecurity framework to guide governments in crafting policies that effectively deter and punish cybercrime, mitigate threats, inform and protect consumers, and respond to cyber incidents.

Endnotes

- ¹ Michael Kan, China Overtakes US in PC Sales Earlier Than Expected, PC World (Aug. 23, 2011).
- ² Rajani Singh & David Daoud, IDC, Worldwide PC Market: 1Q11 Review (July 2011).
- ³ Business Software Alliance, Emerging Markets at a Glance.
- ⁴ The US Buy American Act (41 U.S.C. sec 10a-10d) provides a much more limited range of restrictions on procurement of foreign products than the measures arising in many emerging markets. In addition, by law, the US Congress has since 2004 annually waived application of the Buy America Act to procurement of commercial-item IT products.
- ⁵ PubliTechnology.net & Gartner, Global ICT Public Sector Spend Outstrips Market (Aug. 19, 2010).
- ⁶ WTO, Working Party on the Accession of China — Report of the Working Party on the Accession of China, 340–341 (Oct. 1, 2011).
- ⁷ APEC, 2011 Leaders' Declaration, Annex A: Promoting Effective, Non-Discriminatory, and Market-Driven Innovation Policy (Nov. 13, 2011).
- ⁸ United States Trade Representative Office, 2011 U.S.-China Joint Commission on Commerce and Trade Outcomes (Nov. 2011); see also US Department of the Treasury, The 2011 U.S.-China Strategic and Economic Dialogue U.S. Fact Sheet — Economic Track (May 10, 2011).
- ⁹ Open-source software is a licensing model where the source code of the software is typically made available royalty-free to the users of the software, under terms allowing redistribution and modification with certain restrictions. "Commercial software" refers to software developed by a commercial entity that is typically licensed for a fee to a customer subject to certain conditions.
- ¹⁰ Executive Office of the President, Office of Management and Budget, Memorandum for Chief Information Officers and Senior Procurement Executives (Jan. 7, 2011).
- ¹¹ Article 23, Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts, and public service contracts.
- ¹² Asia-Pacific Economic Cooperation, APEC Principles for Technology Choice Pathfinder (Sept. 1, 2006).
- ¹³ WTO, Working Party on the Accession of China — Report of the Working Party on the Accession of China, 46 (Oct. 1, 2011).
- ¹⁴ APEC, 2011 Leaders' Declaration, Annex A: Promoting Effective, Non-Discriminatory, and Market-Driven Innovation Policy (Nov. 13, 2011).
- ¹⁵ United Nations Development Programme, e-Government Interoperability: Guide, at 10 (2007).
- ¹⁶ IDC, Cloud Computing's Role in Job Creation (March 2012).
- ¹⁷ Vivek Kundra, White House, Federal Cloud Computing Strategy (Feb. 8, 2011).
- ¹⁸ Even in the EU, where efforts are under way to ease the flow of data among member states, some countries are taking steps that would undermine that effort. In Germany, for example, restrictive interpretations of existing laws and policies are being used to justify requirements for geographic restrictions on data. Such restrictions in developed economies are especially damaging in that they can be used by emerging markets to legitimize their own market-access barriers.
- ¹⁹ BSA Global Cloud Computing Scorecard (Feb. 22, 2012).
- ²⁰ Information Technology and Innovation Foundation, Boosting Exports, Jobs, and Economic Growth by Expanding the ITA, at 1 (March 2012).
- ²¹ Information Technology and Innovation Foundation, Boosting Exports, Jobs, and Economic Growth by Expanding the ITA, at 2 (March 2012).
- ²² APEC, 2011 Leaders Declaration (Nov. 12–13, 2012).



www.bsa.org

BSA Worldwide Headquarters

1150 18th Street, NW
Suite 700
Washington, DC 20036

T: +1.202.872.5500
F: +1.202.872.5501

BSA Asia-Pacific

300 Beach Road
#25-08 The Concourse
Singapore 199555

T: +65.6292.2072
F: +65.6292.6369

BSA Europe, Middle East & Africa

2 Queen Anne's Gate Buildings
Dartmouth Street
London, SW1H 9BP
United Kingdom

T: +44.207.340.6080
F: +44.207.340.6090

Bangkok, Thailand Beijing, China Brussels, Belgium Hanoi, Vietnam Jakarta, Indonesia Kuala Lumpur, Malaysia
München, Germany New Delhi, India São Paulo, Brazil Taipei, Taiwan Tokyo, Japan