

# How to Craft an Innovation Maximizing T-TIP Agreement

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*The T-TIP, if done right, can be a model for the rest of the world on how to maximize innovation through trade.*

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The first round of negotiations toward the Transatlantic Trade and Investment Partnership (T-TIP) Agreement began in July 2013. The United States and the European Union (EU) are right to negotiate the T-TIP, but this effort will be fully successful only if it concludes with an agreement dedicated to maximizing innovation.

Traditional trade theory holds that trade maximizes welfare because it allows nations to specialize in activities in which they have a comparative advantage. When trade was largely composed of “northern” industrial goods and “southern” raw materials, this framing may have made sense. But in a globally integrated economy where most trade takes place between nations with similar factor endowments—like the United States and the European Union—and where an increasing share of trade is in innovation-based industries (e.g., information and communication technologies, life sciences, aerospace, and clean energy), the traditional rationale for trade agreements needs to be radically updated.<sup>1</sup>

Innovation is a central driver of economic growth, and thus a key focal point of U.S. and EU economic development strategies. As such, the T-TIP agreement should be designed to maximize technological innovation in the two regions. Moreover, because many countries—particularly developing nations—are embracing an “innovation mercantilist” approach to innovation-based growth through a distortive, beggar-thy-neighbor, export-led approach, the T-TIP, if done right, can be a model for the rest of the world for how to maximize innovation through trade.<sup>2</sup>

Ideally, the T-TIP would eliminate all tariffs and non-tariff barriers to trade. However, realistically, both the European Union and the United States are going to make tradeoffs, and it is important to make these tradeoffs in a manner that promotes innovation-based trade as a fundamental driver of global growth. Consequently, the United States and the

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European Union need to focus on creating an innovation-promoting, high-standard trade agreement in order to maximize the innovation needed to tackle an array of pressing challenges, including developing low-cost clean energy technologies, making more breakthroughs in drugs and medical devices, and creating ever-better technologies to boost productivity.

By signing an agreement that fully and completely eschews “innovation mercantilist” practices, not only will both regions boost innovation-based growth, but they will have provided a template and model for other nations and regions to emulate. Conversely, a weak agreement would be a disservice to all nations involved, and fail to promote the necessary international standards needed to ensure maximum innovation in both the United States and the European Union as well as in third-party countries.

This report begins by providing a framework for understanding the impact of innovation on economic growth. It then provides three key factors that innovation industries need to be successful in today’s competitive global marketplace: 1) expanded market size; 2) limited excess competition; and 3) intellectual property (IP) protection. Finally, it articulates best practices for achieving these three key factors through T-TIP negotiation on critical issues, including: tariffs; non-tariff trade barriers; digital trade; foreign direct investment; non-discriminatory government procurement; forced offsets; domestic market competition; and intellectual property.

As President Obama stated at the launch of the negotiations, “There are going to be sensitivities on both sides. There are going to be politics on both sides. But if we can look beyond the narrow concerns to stay focused on the big picture—the economic and strategic importance of this partnership—I’m hopeful we can achieve the kind of high-standard, comprehensive agreement that the global trading system is looking to us to develop.”<sup>3</sup>

### Summary Policy Recommendations:

- Eliminate all tariffs in trade on innovation industries.
- Liberalize trade in innovative services, especially telecommunication services and audiovisual services.
- Create transparent, science-based regulatory regimes in the pharmaceutical, automotive and agricultural sectors.
- Prohibit the use of data center localization as a condition of market access.
- Honor existing international data flow agreements, such as the Safe Harbor.
- Introduce rules to prevent restrictions on the import and use of commercial encryption technologies.
- Lower all barriers to foreign direct investment.

- Implement an expansion of the EU-U.S. procurement commitments.
- Outlaw the use of forced offsets.
- End government production subsidies to areas of innovative trade, like aerospace.
- Clarify the scope and coverage of national treatment in the General Agreement on Tariffs and Trade (GATT), explicitly subjecting state-influenced entities to a robust national treatment obligation.
- Enshrine 12 years of data exclusivity for biopharmaceutical products.
- Adopt a common definition for trade secrets: any information that has economic value (actual or potential), is not generally known to the public, and for which the trade secret owner has taken reasonable measures to keep private.
- Establish a bilateral R&D participation model in order to coordinate cross-border pre-competitive research partnerships.
- Allow companies participating in pre-competitive research to freely transfer ownership and access rights for foundational IP to affiliates across and between the European Union and the United States.

## WHY IS INNOVATION SO IMPORTANT TO DRIVING GROWTH?

Innovation has become the central driver of national economic well-being and competitiveness—and this is why so many countries are engaged in what might be called “a race for global innovation advantage.”<sup>4</sup> But what is innovation? The Organization for Economic Cooperation and Development (OECD) defines innovation as, “the implementation of a new or significantly improved product (that is, a physical good or service), process, a new marketing method, or a new organizational method in business practices, workplace organization, or external relations.”<sup>5</sup> The key point here is that innovation can be both technological and non-technological in nature. In fact, innovation comes in a multitude of forms, including products, services, production or business processes (for goods or services, respectively), organizational models, business models, and social innovations (innovation directed toward specific societal gains). Within these dimensions, innovation can arise at different points in the innovation process, including conception, research and development, transfer (the shift of the “technology” to the production organization), production and deployment, or marketplace usage.<sup>6</sup>

As a result, in recent years a growing number of economists have come to see that it is not so much accumulation of capital but rather innovation that drives countries’ long-run economic growth.<sup>7</sup> As the OECD notes, “A driving factor for much of the economic growth and rise in living standards in the post-World War II era is the rapid advances in technology and innovation.”<sup>8</sup> The U.S. Department of Commerce estimates that technological innovation has been responsible for as much as 75 percent of the growth in the American economy since World War II.<sup>9</sup> And in a seminal study of 98 developed and

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developing countries, economists Peter Klenow and Andrés Rodríguez-Clare found that up to 90 percent of per-capita income growth stems from innovation.<sup>10</sup>

Innovation also plays a central role in improving citizens' quality of life. Innovation has been and likely will continue to be indispensable to helping societies address difficult challenges, such as developing sustainable sources of food and energy, improving education, combating climate change, meeting the needs of growing and aging populations, and increasing incomes. As such, the most important goal of any trade agreement should be to maximize innovation.

## THE NATURE OF INNOVATION INDUSTRIES

If innovation is the key to global economic, environmental and health progress, a critical question arises: what are the attributes that make a particular industry “innovative”? First, innovation—the continual introduction of new or improvement of existing products, services, or processes—is central to the competitive success of innovation industries. To some extent all industries, even “traditional” industries, innovate. But true innovation industries are ones where the rapid and regular development of new processes, products or services—many of them disruptive in nature—is critical to their competitive advantage. For example, industries like biotechnology and semiconductors are innovation industries, as their success depends not on making the particular drug or semiconductor cheaper, but on inventing the next-generation one.

The second key component of innovation-based industries is that the marginal cost of selling the next product or service is significantly below the average cost. The digital content industry (e.g., software, movies, music, books and video games) is perhaps the most extreme example of this. In some cases it can cost hundreds of millions of dollars to produce the first copy, but additional digital copies can be produced at virtually no cost. Broadband providers invest billions to build networks, where the marginal cost of transporting the next bit can be quite low. Even “atom-based” industries, like aerospace, can have declining marginal costs. For example, it took Boeing almost eight years of development work and an expenditure of over 15 billion dollars before a single 787 Dreamliner was sold.<sup>11</sup> That \$15 billion is built into the overhead of every 787 sold. Economists refer to this as increasing returns to scale. Not all industries have this characteristic. A 2013 study by the European Commission of over 1,000 European companies found increasing returns to scale for high-tech firms, but decreasing returns to scale for low-tech ones.<sup>12</sup>

Finally, innovation industries depend more than other industries on intellectual property (IP), particularly science and technology-based IP. For example, software depends on source code; life sciences on discoveries related to molecular compounds; aerospace upon materials and device discoveries; and the content industries on low levels of piracy. The same study of European firms found that, for non-high-tech mid- and large-size firms, the contribution of knowledge capital to success was less than physical capital, but for high-tech firms it was higher.<sup>13</sup>

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*In the T-TIP, maximizing innovation by innovation industries depends on three factors: 1) ensuring the largest possible markets; 2) limiting non-market-based competition; and 3) ensuring strong IP protection.*

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As a result, for the T-TIP— as in the global trading system generally—to maximize innovation by innovation industries, it will have to get three key factors right: 1) ensuring the largest possible markets; 2) limiting non-market-based competition; and 3) ensuring strong IP protection. All three factors get to the core challenge for innovation industries: investment in innovation is uncertain and therefore higher-than-normal profits on the innovations that are actually successful are needed.

### **PROVISIONS TO EXPAND MARKET SIZE**

For innovation industries with high fixed costs of design and development but lower marginal costs of production, larger markets are critical to enabling them to cover those fixed costs, so that unit costs can be lower and revenues for reinvestment in the next generation of innovation higher. This is why firms in most innovation industries are global. If they can sell in twenty countries rather than five, expanding their sales by a factor of four, their costs increase by much less than a factor of four. This is why numerous studies have found a positive effect of the ratio of cash flow to capital stock on the ratio of R&D investment to capital stock.<sup>14</sup> The more sales, the more earnings that can be plowed back into generating more innovation. This is also why the 2013 European Commission study of European firms found that for high-tech firms, “their capacity for increasing the level of technological knowledge over time is dependent on their size: the larger the R&D investor, the higher its rate of technical progress.”<sup>15</sup>

Thus, the T-TIP needs to enshrine policies that expand effective market size. These include eliminating tariffs, especially for innovation-based industries; curtailing non-tariff barriers; strengthening digital trade; and lowering all barriers to foreign direct investment.

### **Eliminating Tariffs on Innovation Industries**

A key goal of a T-TIP agreement should be to eliminate all duties on bilateral trade on all goods and services. But assuming that neither the EU nor the United States can muster the political will to do so, the focus should be first and foremost on eliminating tariffs in innovation industries. The reason is that tariffs on non-innovation industries, like apparel or lumber for example, usually simply require consumers of these products to pay more (while helping taxpayers generally). But tariffs on innovation industries (e.g., semiconductors) hurt not just the consumers of these products, but also the producers by reducing global market size, balkanizing production, and reducing revenues for reinvestment back into the next round of innovation. Moreover, by raising costs on key capital goods industries (e.g., information and communications technologies, or ICTs), tariffs reduce use of these key innovation and productivity-enabling technologies.

Tariffs on information and communications technology (ICT) products are an area of particular concern. For instance, the European Union imposes import duties on ICT products such as monitors, televisions, digital cameras and video recorders exceeding 5 percent.

Tariffs on ICT products cause ICT-using sectors (e.g., most of the EU and U.S. economies) to suffer, reducing demand for these products, thereby lowering productivity across a wide range of ICT-using industries. They also, as discussed above, limit the next

round of innovation in ICT industries. And the evidence suggests that tariffs do not create competitive domestic ICT industries.<sup>16</sup>

Tariffs on products from other innovation industries include advanced batteries, jet aircraft and instruments. (See Table 2)

| T-TIP Party          | Avg. ICT Tariff, (%) 2011 | Monitors, (%) 2011 | Television/Digital Cameras & Video Recorders, (%) 2011 |
|----------------------|---------------------------|--------------------|--|
| European Union       | 3.9                       | 14.0               | 5.4  |
| United States        | 0.8                       | 2.1                | 1.7  |
| <b>T-TIP Average</b> | <b>0.24</b>               | <b>8.05</b>        | <b>3.55</b>  |

Table 1: Tariffs on Sample Basket of ICT Goods<sup>17</sup>

| T-TIP Party          | Lithium-ion cells and Batteries (%), 2011 | Jet Aircraft, (%) 2011 | Scientific Surveying Instruments, (%) 2011 | Instruments Used in Chemical Analysis, (%) 2011 | Navigational Instruments, (%) 2011 |
|----------------------|---|------------------------|--|---|------------------------------------|
| European Union       | 5.5                                       | 2.7                    | 2.7  | 0.9   | 3.3                                |
| United States        | 2.7                                       | 0.0                    | 2.8  | 0.9   | 1.0                                |
| <b>T-TIP Average</b> | <b>4.1</b>                                | <b>2.7</b>             | <b>2.75</b>                                | <b>0.9</b>                                      | <b>2.5</b>                         |

Table 2: Tariffs on Other Advanced Technology Products<sup>18</sup>

### Curtailing Non-Tariff Barriers

Despite, or perhaps because of, the lowering but not elimination of tariffs, countries' use of non-tariff barriers (NTBs) is on the rise. NTBs refer to measures other than tariffs which distort trade. Examples include: quantitative restrictions; price controls; non-tariff charges, unwarranted customs procedures; discriminatory health and safety standards; currency manipulation; discriminatory application of technical standards; and localization barriers to trade (LBTs). Like tariffs, NTBs are designed to keep foreign products out of domestic markets, which can limit the efficient market size for industries, particularly innovation industries. As discussed above, for innovation industries, this creates harmful side-effects—primarily, it keeps unit costs for a product high, thereby reducing revenue needed for the next round of innovation and limiting their adoption.

Though they are difficult to measure, the World Trade Organization's *2012 World Trade Report* finds that these non-tariff measures are almost twice as trade restrictive as tariffs.<sup>19</sup> Table 3 depicts the varying NTB levels across different innovative sectors in the EU and U.S. economies. Ecorys—a European research and consultancy company—calculated these levels using the survey answers from firms on both sides of the Atlantic regarding the overall levels of NTB restrictiveness and systems regulatory divergence that they feel they face, where 0 indicates a lack of NTBs and 100 indicates prohibitively high NTBs. As can

be seen, significant barriers exist in many innovation-based industries, including electronics equipment, aerospace, and medicines and chemicals.

| Sector  | EU   | USA  |
|---|------|------|
| Aerospace and Space Industry                    | 56.0 | 55.1 |
| Medical, Measuring and Testing Appliances       | 49.3 | 44.5 |
| Biotechnology                                   | 46.1 | 50.2 |
| Chemicals                                       | 45.8 | 53.2 |
| Communication Services                          | 44.6 | 27.0 |
| Office, Information and Communication Equipment | 37.9 | 32.3 |
| Automotive Industry                             | 34.8 | 31.6 |
| Electronics                                     | 30.8 | 20.0 |
| Pharmaceuticals                                 | 23.8 | 44.7 |
| ICT Services                                    | 20.0 | 19.3 |

**Table 3: Overall Levels of Non-Tariff Barriers<sup>20</sup>**

Accordingly, the T-TIP should seek, wherever possible, to eliminate such NTBs. Among the T-TIP parties, barriers to trade in services and regulatory differences constitute two of the most significant NTBs affecting innovation components of trade that need to be addressed as a part of the agreement.

### Trade in Services

Innovative services, like those of the telecommunications and audiovisual sectors, account for an increasing share of employment, gross domestic product (GDP), and economic growth in the transatlantic economy. In the United States and the European Union, services account for 77 and 73 percent of GDP, respectively.<sup>21</sup> Yet, trade openness in the services sector does not match trade openness in the goods sector.

Services are delivered in four ways: 1) across borders, including via digital networks; 2) by providing the service in the firm's home country to a service consumer who is visiting the country; 3) by providing the service within the territory of a country through the firm's subsidiary or branch; or 4) by temporarily sending an employee overseas.<sup>22</sup> While each method is designed to increase the market scale of a firm, it is the first method—digital networks—that is the most innovative and applies to sectors such as audiovisuals and telecommunications.

Thus, economies that limit trade in services across borders can miss out on the innovation-stimulating effects from these transactions. For example, in the audiovisual sector, an expanded market size is critical to expanding the audience. While it requires significant cost

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to produce and create the first copy of film, it costs much less to show a film in different countries, especially given the advent of digital media platforms. The revenues from this can then be reinvested into the next round of audiovisual productions, leading to higher quality films, including ones with better special effects and sound editing. However, when an economy limits this process, by either setting foreign content quotas or banning digital networks, it reduces the potential revenues audiovisual enterprises can earn and precludes their reinvesting these profits back into innovation efforts.

Table 4 shows T-TIP countries' scores on the GATS (General Agreements on Trade in Services) Commitments Restrictiveness Index, which measures the extent of GATS commitments for all 155 services subsectors as classified by the GATS. Economies are scored from 0 (unbound or no commitments) to 100 (completely liberalized).

| Country         | Score |
|-----------------|-------|
| Austria         | 72.1  |
| Latvia          | 69.1  |
| United States   | 65.2  |
| Lithuania       | 59.7  |
| Hungary         | 58.5  |
| Finland         | 57.2  |
| Estonia         | 56.7  |
| Slovenia        | 52.2  |
| Sweden          | 48.5  |
| Croatia         | 48.5  |
| Denmark         | 47.1  |
| Luxembourg      | 47.0  |
| Netherlands     | 47.0  |
| United Kingdom  | 46.8  |
| Belgium         | 46.4  |
| Germany         | 46.4  |
| Spain           | 46.3  |
| France          | 45.9  |
| Italy           | 45.6  |
| Greece          | 45.3  |
| Portugal        | 44.2  |
| Czech Republic  | 43.4  |
| Romania         | 41.1  |
| Poland          | 41.0  |
| Ireland         | 39.0  |
| Slovak Republic | 38.9  |
| Bulgaria        | 36.1  |
| Malta           | 6.3   |
| Cyprus          | 5.7   |

**Table 4: General Agreements on Trade in Services Commitments Restrictiveness Index, 2009<sup>23</sup>**



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The inconsistency across EU member states alone—Austria ranks quite highly, while Cyprus and Malta score quite low—indicates a need for more policy harmonization in the area of trade in services across the EU Common Market, and also presents difficulty for a liberalization agreement with the United States.

Specifically, according to the *2013 National Trade Estimate Report on Foreign Trade Barriers*, the European Union has the most barriers in the area of innovative services, including the telecommunications and audiovisual services sectors. The level of restrictiveness is generally lower in the United States than in the European Union.

#### **Telecommunications Services**

All EU member states made World Trade Organization (WTO) commitments to provide market access and national treatment for voice telephony and data services via the 2002 EU Common Regulatory Framework for Electronic Communications Networks and Services (the Framework Directive). The Framework Directive imposed liberalization and harmonization requirements on member states, but implementation of these requirements has been uneven across member states. Significant problems remain in many markets, including Austria, France, Germany, Greece and Italy.<sup>24</sup>

#### **Audiovisual Services**

In addition, several EU member states maintain measures that hinder the free flow of some programming or film exhibitions. The 2007 EU Directive on Audiovisual Media Services (AVMS) amended and extended the scope of the 1989 Television without Frontiers Directive, or Broadcast Directive, (which already covered traditional broadcasting, whether delivered by terrestrial, cable, or satellite means) to also cover audiovisual media services provided on-demand, including via the Internet. While on-demand services are subject to less restrictive provisions under the AVMS, unfortunately, EU member state content quotas for broadcasting remain in place. In May 2012, the Commission noted that 25 member states had fully implemented the AVMS Directive correctly; however, Belgium, Croatia and Poland still need to adapt their legislation, and Poland is currently subject to an infringement procedure for failing to adapt.<sup>25</sup>

The mandate given by the European Commission to EU trade negotiators for the T-TIP specifically excludes audiovisual services from the Services Chapter at the request of France. France has some of the most restrictive audiovisual regulations, designed to protect what is seen as a “culturally important” sector. For example, France continues to apply the EU Broadcast Directive in a restrictive manner. France’s implementing legislation, which was approved by the European Commission in 1992, requires that 60 percent of programming be EU-originated and 40 percent be in the French language.<sup>26</sup> These requirements exceed those of the EU Broadcast Directive. Moreover, these quotas apply to both the regular and prime time programming slots, and the definition of prime time differs from network to network. The prime time restrictions pose a significant barrier to U.S. programs in the French market. Internet, cable, and satellite networks are permitted to distribute as little as 50 percent EU content (the AVMS Directive minimum) and 30 percent to 35 percent French-language product, but, in exchange, channels and services are required to increase their investment in the production of French-language product.<sup>27</sup>

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Beyond broadcasting quotas, cinemas must reserve five weeks per quarter for the exhibition of French feature films. This requirement is reduced to four weeks per quarter for theaters that include a French short subject film during six weeks of the preceding quarter.<sup>28</sup> Theatrically released feature films are not allowed to be advertised on television.

However, this line of reasoning limits the economic potential from the audiovisual sector, as well as the liberalizing nature of the T-TIP. By removing audiovisuals from the negotiating table, the French limit the ability to expand the French audiovisual sector. By liberalizing its own audiovisual sector, the French would receive reciprocal U.S. market access, especially through Internet services such as Netflix (currently unavailable in France), thereby broadening the audience for French cinema. A European Union-United States integrated market would increase the number of people available to consume film digitally, particularly for niche areas such as documentary and art house films that rely on word-of-mouth and digital sales—as opposed to traditional cinema showings—to earn back revenues.

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### **Transparent, Science-Based Regulatory Regimes**

Differences in regulations, especially for innovative products like pharmaceuticals, chemicals, automobiles and genetically modified (GM) foods, are frequently cited as the largest obstacle to bilateral trade between the United States and the European Union. The Center for Economic Policy Research estimates that 80 percent of the potential economic gains from the T-TIP depend on reducing the conflicts and duplications between EU and U.S. rules and regulations, from food safety to automobile parts.<sup>29</sup> Many of these regulatory differences are unnecessary, as the United States and European Union strive to provide similar levels of consumer, environmental, and investor protection. In other words, EU and U.S. regulatory procedures lead to similar outcomes, even if procedures vary.

An optimal regulatory environment between the European Union and the United States will allow markets for innovative products, such as pharmaceuticals, chemicals, automobiles, and agricultural biotechnology, to expand. Discriminatory standards limit the ability of firms to sell in foreign markets, thereby raising the cost of goods used in production, leading to fewer revenues, and ultimately, less innovation.

An enhanced bilateral relationship between the United States and the European Union represents a unique opportunity to seek greater regulatory compatibility through streamlined processes and procedures. According to a 2007 Pew Study, roughly 80 percent of Americans and Europeans surveyed support making regulations “as similar as possible” for products and services.<sup>30</sup> This means keeping the level of regulatory oversight needed to ensure safety the same, while making enforcement for regulators and compliance for businesses easier.

Objectives should be to yield greater openness, transparency, and convergence in regulatory approaches and requirements and related standards-development processes, as well as to reduce redundant and burdensome testing and certification requirements, promote confidence in respective conformity assessment bodies, and enhance cooperation on conformity assessment and standardization issues globally.

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In the pharmaceutical sector, the European Union and the United States need to give particular emphasis to:

1. Mutual acceptance of each other's Good Manufacturing Practice (GMP) and Good Clinical Practice (GCP) inspections. This recognition could encompass inspections by European inspectors within the European Union, Food and Drug Administration (FDA) inspections of U.S. sites, and inspections that both European and U.S. inspectors conduct outside the United States and European Union.
2. Developing a harmonized structural framework between the FDA and European Medicines Agency (EMA) for risk-benefit assessment, while retaining authority to make different risk-benefit judgments under their individual approval schemes.
3. Providing harmonized advice on design of multi-regional trials that could support approval in both regions. The agencies should consider providing this advice in the form of a new International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) guidance or revisions to existing guidance on acceptability of foreign studies.
4. Collaborating to establish a harmonized list of clinical trial result data fields, and agreeing on which of these data fields may be disclosed to the public.
5. Working together to ensure that national/regional pharmaceutical coding systems are based on common standards for the use of unique identifiers developed using non-proprietary, harmonized international standards.<sup>31</sup>

In the automotive sector, the European Union and the United States should seek an outcome recognizing that if the overall level of protection is comparable, motor vehicles, as well as their manufactured parts and components, that are in compliance with the technical requirements of one party, are also in compliance with the technical requirements of the other. In chemicals, the European Union and the United States should aim for cooperation in prioritizing chemicals for evaluation (and for risk assessment methodologies); alignment in classification and labeling; cooperation on new and emerging issues; and enhanced information sharing and protection of confidential business information.

Yet another, even more contentious arena provides substantial opportunity for mutually beneficial outcomes presently blocked by short-term politics. Although there is a (questionable) perception that EU consumers are hostile to “genetically modified” foods, Europe is globally the largest net importer of commodity grain improved through biotechnology.<sup>32</sup> The European Union imports more than 30 million tons of animal feed each year for its livestock industry.<sup>33</sup> Imports—mainly soy and corn—are sourced mainly from the Americas, particularly Argentina, Brazil and the United States. The vast majority of the commodities available for import are from crops improved through biotechnology, so-called genetically modified (GM).<sup>34</sup>

As argued by ITIF in *Ag Biotech Opponents Want the US to Emulate European Regulation of Biotechnology—They Should Think Again*, European imports of GM food and feed are

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complicated by regulatory restrictions based more on politics than science.<sup>35</sup> These restrictions have been found to violate European commitments under the WTO Sanitary and Phytosanitary (SPS) agreement.<sup>36</sup> European regulatory approvals for these commodities have historically lagged behind those in the United States and other OECD countries, sometimes by several years.<sup>37</sup> The disruptions from these “asynchronous approvals” have been exacerbated by a zero-tolerance standard for the adventitious presence of EU unapproved grains in import shipments of approved materials. The resulting trade disruptions have been numerous and costly, and have not resulted in improvements to the safety of European food and feed.<sup>38</sup>

These transatlantic trade tensions have nothing to do with science, and everything to do with politics. Regulators on both sides of the Atlantic routinely reach the same conclusions about the safety of these products, but in the European Union the final approval must be given by political decision makers rather than by independent experts bound to follow the data.<sup>39</sup> There are a number of different ways that the European Union could improve the functioning of its regulatory regime in this area, but the simplest would be to put an end to the political log jams that block formal approvals. This would dramatically decrease the conflict between approval decisions in exporting and importing countries, thus reducing the potential for trade disruptions with the associated substantial costs. Yet the European Union has stated in advance that these issues shall be “off the table” in the T-TIP negotiations, falsely framing this as necessary to safeguard consumer health.<sup>40</sup> Given that the European Union has rejected similar requests from member states repeatedly, the irony is palpable.<sup>41</sup>

The United States Trade Representative (USTR) must keep the pressure on the European Union to fulfill its obligations under the WTO, and find an expeditious way to end the obstructionism of special interest groups to the detriment of consumers, producers, and the global environment.<sup>42</sup>

### **Strengthening Digital Trade**

Digital trade is important because ICTs are the global economy’s strongest driver of productivity, innovation and growth. The McKinsey Global Institute estimates that the Internet alone accounted for 21 percent of aggregate GDP growth between 2007 and 2011 across 13 of the world’s largest economies, including France, Germany, Italy, Sweden, the United Kingdom, and the United States.<sup>43</sup> A March 2013 study by Finland’s Ministry of Employment and Economy estimates that by 2025, half of all value in the global economy will be created digitally.<sup>44</sup>

Therefore, ensuring the uninhibited flow of information, data and ICT products and services across borders is vital to realizing a robust global economy as well as healthy individual economies within the parties to the T-TIP.

### **Data Centers**

Trade restrictions such as local data storage requirements shrink the possible market size for digital service enterprises by forcing them to build data centers in the country where they wish to provide storage capacity. This raises input costs, and correspondingly reduces

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revenues, leading to fewer profits available for reinvestment in the next generation of data technology, and higher costs for cloud data users.

In the European Union, Greece has already passed laws that require data generated within the country to be stored on servers within the country. Both Denmark and Norway issued rulings to prevent the use of cloud computing services when servers are not located domestically.<sup>45</sup> Thus, the T-TIP needs to maximize opportunities for ICT service suppliers to provide computer and related services, telecom services, or other services over the Internet on a cross-border and technology-neutral basis. In addition, the T-TIP should specifically prohibit countries from requiring foreign enterprises to locate servers or data in-country as a condition for market access. A robust T-TIP can not only reduce digital barriers to trade within the European Union and the United States; it can be a unique opportunity to promote global standards, principles, and norms on issues that can impede the evolution of the digital economy.

### Data Privacy

In the new, data-driven 21st century economy, advances in computing technology—including faster processors, cheaper storage, lower-cost sensors, superior algorithms, better displays, and ubiquitous wireless networks—enable greater use of data.<sup>46</sup> Therefore, ensuring the free flow of data across borders is critical to unlocking additional opportunities to harness data and create a world that is alive with information.

In many instances, laws restricting the flow of data are motivated by mercantilist concerns and often justified on the basis of privacy concerns. The belief is that if data are required to be kept within a country, either it will be more secure, or governments will be better able to prosecute those who violate privacy laws—but neither is true. Data are no more likely to be secure or insecure in Canada, Korea, India, or the United States. Data breaches can occur anywhere. And rogue employees can be anywhere. If anything, just as money is more secure in established banks, data are likely more secure in large, established cloud providers that are global in scope. The second issue of jurisdiction is just as flawed. The location of servers has absolutely no effect—for good or bad—on commercial privacy, as the local government would still have legal jurisdiction over companies who own the data, regardless of where their data are actually stored. Mandating that data be stored locally has no positive effect on privacy or security.

The EU Data Protection Directive (95/46/EC) only permits the personal information of EU citizens to leave the European Union if the European Commission considers the receiving country's data protection regime to be "adequate." In 2000, the Commission ruled that the U.S.-EU Safe Harbor Program fulfilled the obligations of adequacy status. The program requires U.S. firms to self-certify to the Department of Commerce that they will operate using Safe Harbor principles. The Safe Harbor has provided a mechanism to allow U.S. and EU companies to exchange data while still ensuring that safeguards are in place. With the revelations from PRISM, however, some European data protection authorities have called for a suspension of data transfers under this agreement since U.S. companies are in apparent violation.<sup>47</sup>

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The United States and the European Union have placed different priorities on privacy, making agreement on a common framework unlikely. However, the United States and the European Union need to find a way to enable digital trade in data, even if the framework between the two markets is not the same. Ending the Safe Harbor as a means of protecting privacy is not the answer, as this will drastically limit enterprises' ability to do business across borders. It will slow the expansion of trade in digital services, particularly in cloud computing.<sup>48</sup>

Thus, the European Union and the United States need to work together to minimize the potential burdens of developing and implementing separate privacy policy frameworks; to continue to honor existing international agreements (including Safe Harbor) regarding data flows; to support the mapping of new regulations so that global organizations can leverage existing compliance procedures to satisfy compliance requirements in other regulations; and to recognize the essential role of both ICT innovation and privacy in an optimized digital economy.

### **Encryption Technologies**

The world uses encryption technology every day. For example, encryption is used in websites to ensure security when shopping or banking online; in ATMs and smart cards to validate transactions; in mobile phones and other wireless devices to ensure privacy of communications; in medical applications to protect sensitive personal information; and even in car keys and garage door openers to prevent unauthorized access. In fact, encryption is found in nearly every information communication technology product. Semiconductors, which provide data processing and storage, are the key device that enables encryption in these products.<sup>49</sup>

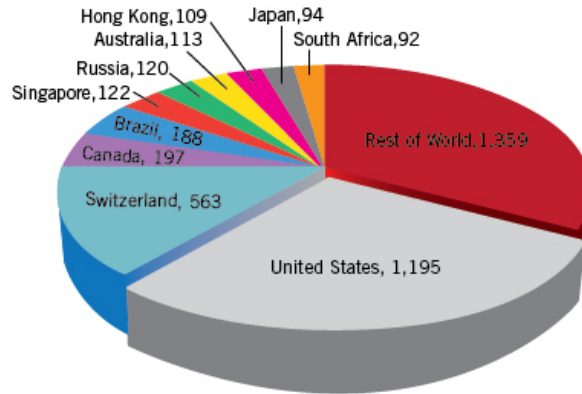
As a result, the T-TIP should introduce rules to prevent restrictions on the import and use of commercial encryption technologies. Such rules need to: 1) specify that the import, use, and sale of products containing encryption should be largely unrestricted; and 2) encourage a flexible, global approach in those narrow circumstances where regulation may be justified (e.g., certain government or military uses).

### **Lowering Barriers to Foreign Direct Investment**

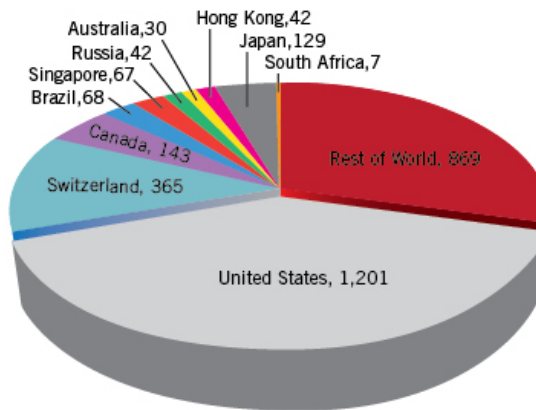
A vital component of expanded market access for innovation industries is the ability to engage in foreign direct investment (FDI). In fact, global commerce is increasingly driven by FDI, rather than just trade alone. In the transatlantic market, cross-border investments are pivotal for growth and prosperity. FDI can contribute significantly to regional innovation capacity and economic growth, in part through the transfer of technology and managerial know-how. But restrictions on FDI reduce this capacity, primarily by restricting the market size for innovative foreign enterprises that wish to invest in FDI, ultimately raising production costs for the innovative domestic enterprises that lose out on the improved technology and knowledge from abroad.

An investment initiative is particularly timely given the centralization of EU investment policy as a result of the Lisbon Treaty entering into force. The United States and the European Union already enjoy a very broad and deep bilateral investment relationship.

According to the *Final Report* from the High Level Working Group on Jobs and Growth, the United States and European Union have directly invested more than \$3.7 trillion (€2.8 trillion) across both sides of the Atlantic.



Top Ten Hosts of EU Outward FDI Stocks, 2010 (in Billion Euros)



Top Ten Hosts of EU Inward FDI Stocks, 2010 (in Billion Euros)

**Figure 2: EU Hosts of Outward FDI Stocks/EU Hosts of Inward FDI Stocks<sup>50</sup>**

However, certain barriers remain. While this relationship is beneficial in economic terms, it also provides many opportunities for investor-state litigation, which causes concern that investment might interfere with domestic policy autonomy. Thus, the T-TIP should include investment liberalization and protection provisions based on the highest levels of liberalization and highest standards of protection that have been negotiated between the European Union and the United States to date. It should include provisions on procedures for state-investor dispute settlement, and assure non-discrimination of foreign investors, free transfers and protection in case of expropriation.

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Addressing these restrictions and converging bilateral investment policies through the T-TIP will provide assurance to investors as well as revitalize business. Moreover, the example American and European policymakers set in the transatlantic investment marketplace will add credibility to their press for open investment policies in international settings like the G20, as well as work together to convince other countries of the benefits of open investment.

## PROVISIONS TO LIMIT NON-MARKET BASED COMPETITION

Large markets enable firms to sell more. But if larger markets come with larger numbers of competitors, total sales per firm can remain the same or even fall. Conventional wisdom holds that this competition is good for innovation. However, many studies have demonstrated that innovation and competition can be modeled according to an inverted “U” relation, with both too much and too little competition producing less innovation. One study of UK manufacturing firms found this relationship. Others, including Scherer and Mukoyoma, have found similar patterns.<sup>51</sup> In a study of U.S. manufacturing firms, Hashmi found that too much competition led to reduced innovation in a slightly negative relationship.<sup>52</sup> In other words, firms need to be able to obtain “Schumpeterian” profits to reinvest in innovation that is both expensive and uncertain. As Carl Shapiro notes, “innovation incentives are low if ex-post competition is so intense that even successful innovators cannot earn profits sufficient to allow a reasonable risk-adjusted rate of return on their R&D cost.”<sup>53</sup>

This does not mean that market-generated competition is detrimental. Normally, markets will not produce an excess number of competitors. But governments often do, through financial bail-outs, discriminatory government procurement, or other policies favoring weaker domestic innovation firms. For example, France’s ill-fated gambit in 2008 to introduce the French-backed search engine Quaero “as the next Google-killer” was a clear manifestation of favoring a weak domestic firm.<sup>54</sup>

These policies enable weak firms to remain in the market, drawing off sales from stronger firms and reducing their ability to reinvest in innovation. To be clear, some government innovation policies can be pro-innovation if they help innovative firms overcome particular challenges. Public-private research partnerships, such as Germany’s Fraunhofer Institutes, are a case in point. But these partnerships, designed to help firms in an industry solve complex technical challenges, are different from mercantilist policies subsidizing or protecting particular firms which otherwise would exit the market.

Thus, the T-TIP needs to be a trade agreement dedicated to eliminating excess competition stemming from discriminatory government procurement, unfair use of government subsidies, and protected markets.

## Promoting Non-Discriminatory Government Procurement

A key T-TIP goal should be to enhance business opportunities through substantially improved access to government procurement opportunities at all levels of government on the basis of fair national treatment, regardless of firm ownership status. In essence, this

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*Governments often produce an excess number of competitors, through financial bail-outs, discriminatory government procurement, or other policies favoring weaker domestic innovation firms.*

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means that governments should not discriminate against foreign firms in their procurement practices.

It is important to note that there are two ways to consider discriminatory government procurement practices; the first, involving localization barriers to trade (LBTs), relies on market balkanization through hindering the expansion prospects of foreign firms into new regions. This can include forcing local production or local infrastructure in order to be eligible for government contracts. The second—and much of what the European Union and the United States engage in—relies on creating excess, potentially inefficient competition, by propping up high-cost domestic enterprises at the expense of lower-cost foreign ones. This can include setting price preferences for domestically owned enterprises, or erecting onerous contract and certification regulations for foreign firms.

The WTO's Government Procurement Agreement (GPA) prohibits restrictions on government purchases between member countries, stating that companies in other signatory countries will be treated no less favorably than domestic companies in accordance with the principles of national treatment and non-discrimination. This applies at both the central and sub-central levels of government.

The United States is a signatory federally to the GPA; however, individual states have the right to decide if they wish to become party to the GPA since the federal government has little control over how state governments choose to award government contracts. It is therefore a concern that only 37 of the 50 states in the United States are signatories to the GPA: Alabama, Alaska, Georgia, Indiana, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, South Carolina, Virginia and West Virginia have not signed the agreement. In addition, not all sub-central contracts are available for foreign procurement in the United States; in other words, many states limit the contracting opportunities to, for example, only the executive branch, or only the department of transportation. Maryland, Massachusetts, Pennsylvania and Wisconsin set the best examples of openness in government procurement in the United States.

In the European Union, all 28 member states are signatories to the GPA. According to the *2013 National Trade Estimate Report on Foreign Trade Barriers*, however, the EU adopted a revised Utilities Directive in 2004, covering purchases in the water, transportation, energy, and postal services sectors. This directive requires open, competitive bidding procedures, but discriminates against bids with less than 50 percent EU content that are not covered by an international or reciprocal bilateral agreement. The EU content requirement applies to foreign suppliers of goods and services in the following sectors: water, energy, urban transport, and postal services. In March 2012, the European Commission proposed a significant new regulation on the access that third-country goods and services have to EU procurement markets. In a similar manner to the Utilities Directive of 2004, the proposed regulation would allow local authorities to restrict access to procurement contracts if more than 50 percent of the value of goods and services in a tender comes from countries outside of the GPA.

U.S. companies point to several instances of preferential treatment in government procurement among EU member states. For example, invitations for bids for the Austrian

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government's vehicle fleet are tailored for German competitors; there are difficulties in getting certification documents accepted to bid on projects in Bulgaria; and France typically does not allow non-EU defense procurement, and also tends to heavily favor French companies within the European Union.<sup>55</sup> In Greece, U.S. companies face onerous qualification requirements when seeking to bid on public procurement tenders. Companies must submit documentation from competent authorities indicating that they have paid taxes, have not been in bankruptcy, and have paid in full social security obligations for their employees. All managing directors and board members of companies that want to participate in procurements must submit certifications from competent authorities that they have not engaged in fraud, money laundering, criminal activity, or similar activities. It is difficult for U.S. firms to comply with these requirements, because there are no competent authorities in the United States that issue these types of certifications.<sup>56</sup>

On March 30, 2012, the WTO parties to the GPA formally adopted a revised version of the GPA. In conjunction with the revised GPA, the United States and the European Union agreed to establish a Bilateral Procurement Forum for the purpose of improving the U.S.-EU procurement relationship, including by exploring the possible expansion of each other's procurement commitments. Thus, the T-TIP negotiations should work to implement this expansion by comprehensively tackling market access barriers related to government procurement, in a manner that goes beyond what the United States and the European Union have achieved in previous trade agreements. A successful T-TIP agreement should ensure an open, transparent, non-discriminatory and efficient government procurement process that will optimize competition among bidders, especially in historically difficult EU member states such as Greece. In addition, the T-TIP should encourage a more efficient use of government funds in procurement, especially at the state level in the United States, where discrimination against foreign procurement can cause overspending. Finally, in order to set a sterling global example, the European Union and the United States need to make a commitment to refrain from imposing any more restrictive policies, with respect to procurement, on the suppliers of goods and services.

### Limiting Forced Offsets

Forced offsets encompass a range of industrial compensation arrangements required by governments as a condition of government procurement (and sometimes private procurement) contracts.<sup>57</sup> Historically offsets have been used primarily in the aerospace and defense industries, usually associated with countries' purchases of defense products manufactured abroad. Similar to discriminatory government procurement, forced offsets create excess competition by promoting domestic suppliers at the expense of foreign ones. They often compel foreign enterprises to transfer knowledge, technology, etc. to domestic enterprises as a condition of receiving a government contract, thereby propping up firms that may not survive in market-based competition.

To understand how forced offsets impact the U.S. defense industry, consider that, in 2011, nine U.S. firms reported entering into 59 contracts that had related offset agreements for the sale of defense items and services. These contracts, signed with 27 countries, were valued at \$10.7 billion.<sup>58</sup> The offset agreements were valued at \$5.48 billion, which equaled 50.9 percent of the value of the signed defense export sales contracts.<sup>59</sup> During

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2011, reported offset agreements ranged from a low of 25 percent of the defense export sales contract value to a high of 100 percent.<sup>60</sup>

Unfortunately, in 2010, European Defense Agency (EDA) members accounted for 36.1 percent of forced offsets reported by U.S. firms based on value, and a quarter of forced offsets based on quantity.<sup>61</sup> Specifically, U.S. firms reported 205 offset transactions with EDA members, with an actual value of \$1.22 billion, and an offset credit value of \$1.69 billion.<sup>62</sup> However, 2011 was the entry into force of the European Union Defense Procurement Directive (the Directive). As of April 2013, all EU member states have adopted the Directive into their national laws. The Directive does not explicitly use the term “offsets,” but published guidance from the European Commission states that procurements made pursuant to the Directive do not permit offsets. Most importantly, if a member state wishes to impose offset obligations on the procurement of defense articles, it will need to invoke Article 346 (the national security exception) of the Treaty on the Functioning of the European Union (TFEU).<sup>63</sup>

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*The T-TIP needs to outlaw the use of forced offsets on both sides of the Atlantic.*

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Thus, the T-TIP needs to outlaw the use of forced offsets on both sides of the Atlantic. In addition, the United States and the European Union need to actively engage multinational organizations and continue discussions within the North Atlantic Treaty Organization to limit the adverse effects of offsets in defense trade. Setting this standard in the T-TIP will have broader ramifications for trade agreements going forward in markets where the use of forced offsets is more commonplace (e.g., India and Turkey).

### **Encouraging Market-Based Competition**

As William Lewis, the former head of the McKinsey Global Institute, has argued, perhaps there is no factor more important to driving economic growth than the presence of competitive markets. As Lewis contends, “Differences in competition in product markets are much more important [than differences in labor and capital markets]. Policies governing competition in product markets are as important as macroeconomic policies.”<sup>64</sup> Countries that support competitive domestic markets create the conditions for new entrepreneurial ventures to flourish while at the same time limiting excess competition and incentivizing established firms to continue to innovate and to boost productivity. For competitive domestic markets to thrive in economies, governments must reduce the use of unfair subsidies and curb the role of state-owned enterprises.

### **Unfair Subsidies**

Subsidies ultimately create excess competition by promoting either high-cost or inefficient domestic firms at the expense of more effective foreign ones. Without the government subsidy, the domestic enterprise would surely be eliminated by market forces and in many cases its continued presence lowers incentives for innovation among more efficient firms because competition is too intense to enable them to earn a fair rate of return on R&D.

Unfortunately, one of the biggest WTO subsidy disputes in the last 10 years was between the European Union and the United States regarding the innovative aerospace industry. According to the *2013 National Trade Estimate Report*, the governments of France, Germany, Spain, and the United Kingdom have provided subsidies to their Airbus-

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affiliated companies to aid in the development, production, and marketing of Airbus's large civil aircraft. These governments have financed between 33 percent and 100 percent of the development costs of all Airbus aircraft models (launch aid) and have provided other forms of support, including equity infusions, debt forgiveness, debt rollovers, and marketing assistance, in addition to political and economic pressure on purchasing governments.<sup>65</sup>

The EU's aeronautics research programs are driven significantly by a policy intended to enhance the international competitiveness of the EU civil aeronautics industry. EU governments have spent hundreds of millions of dollars to create infrastructure for Airbus programs, including \$1 billion spent by the City of Hamburg to drain the wetlands that Airbus is currently using as an assembly site for the A380 "superjumbo" aircraft. French authorities also spent €182 million to create the AeroConstellation site, which contains additional facilities for the A380. The Airbus A380, the beneficiary of more than \$5 billion in subsidies, is the most heavily subsidized aircraft in history. Some EU governments have also made legally binding commitments of launch aid for the new Airbus A350 aircraft, even though Airbus has barely begun to repay the financing it has received for the A380.<sup>66</sup>

On May 31, 2005, the United States requested establishment of a WTO panel to address its concern that EU subsidies were inconsistent with the WTO Agreement on Subsidies and Countervailing Measures. In 2010, the dispute settlement panel found in favor of the United States on the central claims, alleging that Airbus had received over \$18 billion in illegal subsidies.<sup>67</sup> In 2004, a separate dispute was brought by the European Union against the United States for subsidies provided to Boeing. In 2012, the WTO found that the U.S. measures under contention mostly consisted of allowed research funded by NASA and the Department of Defense, along with tax breaks granted by the state of Washington and city of Wichita.<sup>68</sup> As a result, the amount of illegal subsidies to Boeing was far lower, around \$3 billion.<sup>69</sup>

Though the WTO has ruled in favor of the United States, Europe continues to subsidize Airbus through pressure on European airlines to purchase Airbus instead of Boeing planes. AirFrance, which is partially owned by the French government, operates a fleet that is 71 percent Airbus, while 62 percent of Germany's Lufthansa fleet is Airbus. Seventy-one percent of active planes for Alitalia are Airbus, while 100 percent of Iberia's (Spain's major airline) planes are Airbus. In contrast, for the top five U.S. airlines (American, Delta, Southwest, USAirways, and United), just 15 percent of active planes are Airbus; the rest are largely Boeing. One might argue, wrongly as it would turn out, that American airlines are biased toward Boeing just as European carriers are biased toward Airbus. But the American market demographics are similar to other parts of the world. Just 15 percent of All Nippon Airways and Japan Airlines planes are Airbus. Korean Air, Malaysia, and Singapore buy 22 percent, 29 percent, and 13 percent, respectively, of their fleets from Airbus. That the overwhelming share of the European airline fleet is Airbus clearly suggests untoward government influence (designed to prevent imports) in European carriers' selection of aircraft.<sup>70</sup>

In order for the United States and the European Union to reach a T-TIP dedicated to promoting open, market-based competition, subsidies in areas of innovative trade need to

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come to an end. While the T-TIP needs to uphold the WTO Agreement on Subsidies and Countervailing Measures, more must be done to facilitate trust in this matter between the European Union and the United States. This can include creating a special working group to negotiate when complaints of subsidies arise, before filing a WTO Dispute.

### State-Owned Enterprises

The T-TIP also represents an important opportunity to develop more adequate and effective rules governing the operation of state-owned enterprise (SOEs) and state-supported enterprises (SSEs) so that companies from all countries can compete on an equal footing under terms of “competitive neutrality.”<sup>71</sup> Competitive neutrality—a key principle advocated in the OECD’s work on SOEs and corporate governance—holds that government-supported business activities should not enjoy net competitive advantage over their private sector competitors.<sup>72</sup> However, when SOEs do have net competitive advantages over their private sector counterparts, it creates unfair and excess competition in the market, because it favors these enterprises at the expense of private sector ones.

In the European Union, the French state directly and indirectly owns controlling stakes in several companies, such as the nuclear-engineering group Areva. In addition, the French government has significant minority shares of other companies, including France Telecom SA, airline Air France-KLM, and car maker Renault. In the 1990s, successive French governments engaged in massive privatizations, but retained control over what were deemed “strategic assets,” such as energy companies. But recently, because of the euro-zone crisis, the value of these stakes nosedived, making the government all the more reluctant to sell any shares.<sup>73</sup> In effect, this props up these SOEs and SSEs, creating excess competition for not only U.S. enterprises that might wish to participate on equal footing in the French market, but for other European enterprises as well.

Thus, the T-TIP should clarify the scope and coverage of national treatment in the General Agreement on Tariffs and Trade (GATT), explicitly subjecting state-influenced entities to a robust national treatment obligation. The goal is to capture policies and practices that benefit state-supported firms and entities and give them unfair advantage over private firms in competing for market access in their home markets, in cross-border transactions, and in third markets.<sup>74</sup> In addition, the existing procurement exemption of the GATT national treatment obligation should be modified to prevent misuse of the provision that could allow wide swaths of state behavior to escape the basic non-discrimination obligation. Specifically, the procurement exemption should be replaced with a more limited exception to national treatment for purchases by and for the use of identified government agencies and covered entities.<sup>75</sup>

## PROVISIONS TO PROTECT AND EXPAND THE BASE OF INTELLECTUAL PROPERTY

Firms in innovation-based industries depend on intangible capital, much of it intellectual property. Strong intellectual property rights spur innovative activity by increasing an innovator’s ability to appropriate the returns to innovation, enabling them to capture more of the benefits of their own innovative activity. By raising the private rate of return closer to the social rate of return, intellectual property addresses the knowledge-asset incentive

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problem, allowing inventors to realize economic gain from their inventions, thereby catalyzing economic growth. In addition, as they capture a larger portion of the benefits of their innovative activity, innovators obtain the resources to pursue the next generation of innovative activities. However, if competitors are able to enter and/or remain in the market because they obtain an innovator's IP at less than the fair market price (either through theft or coerced transfer), they are able to siphon off sales that would otherwise go to innovators. Why would a firm invest in intellectual property if other firms copy it to compete against them?

Consequently, academic evidence supports the theory that there is a relationship between the strength of an economy's IP protections and the extent to which foreign firms will participate in trade, foreign direct investment, and technology transfer with a country. In particular, IP policy significantly influences direct investment in new technology areas such as biotechnology, semiconductors, and computer software.<sup>76</sup> For example, the United Nations Commission on Transnational Corporations (UNCTC) has found that weak IP rights reduce pharmaceutical and software investment.<sup>77</sup> Weak IP rights reduce flows of all types of commercial activities—trade, FDI, and technology transfer—regardless of an economy's level of economic development.<sup>78</sup> By contrast, strengthening of intellectual property rights has been connected with both increased inflows of FDI, and trade in high technology products.<sup>79</sup> In particular, stronger IPRs in developing economies are associated with an increase of technology-intensive FDI.<sup>80</sup> Branstetter, Fisman, and Foley find that stricter patent laws increase FDI, which increases economic growth more than the imitation growth potential of less robust patent laws.<sup>81</sup>

Robust IP protection also leads to increased levels of R&D and innovation in both developing and developed economies. A number of studies have found that R&D/GDP ratios are positively related to the strength of patent rights.<sup>82</sup> Cavazos Cepeda et al. find that for every 1 percent increase in the level of protection of IP rights in an economy—measured by improvements to an economy's score in the Patent Rights Index—there was, on average, a 0.7 percent increase in the domestic level of R&D. Likewise, a 1 percent increase in copyright protection is associated with a 3.3 percent increase in domestic R&D, while a 1 percent increase in trademark protection is associated with a 1.4 percent increase in domestic R&D.<sup>83</sup> Ultimately, as a definitive OECD review of the effects of IP rights protections on developing economies found, “the results point to a tendency for IPR reform to deliver positive economic results.”<sup>84</sup>

Furthermore, changes in IP rights regimes may also be associated with a country's greater involvement in the manufacturing and trade of pharmaceuticals and other knowledge-intensive goods.<sup>85</sup> R&D activity in pharmaceuticals has historically been concentrated in countries with strong and enforceable intellectual property rights laws and has only just begun to grow in countries that have recently adopted OECD-style patent systems under the provisions of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement.<sup>86</sup> For example, Delgado, Kyle, and McGahan find that global trade in pharmaceuticals and related products has increased since the passage of the TRIPS agreement, relative to sectors identified as being less affected by its provisions.<sup>87</sup> Thus, stronger IPR provisions appear to be important drivers of biomedical R&D.

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*Securing strong intellectual property protection is in the interest of the United States, the European Union, and the broader global economy.*

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As a result, securing strong intellectual property protection is in the interest of the United States, the European Union, and the broader global economy. The strong protections and enforcement provisions that both the European Union and the United States currently provide in their domestic markets is evidence of commitment to this idea. In the United States, a 2012 U.S. Department of Commerce study found that IP industries support at least 40 million jobs, contribute more than \$5 trillion, or 34.8 percent, to GDP, and account for \$775 billion in exports.<sup>88</sup> Meanwhile, in the European Union, the value of the top 10 brands in each EU country amounts to almost 10 percent of GDP on average. Copyright-based creative industries, such as software, book and newspaper publishing, music, and film, contributed around 3.3 percent to EU GDP in 2006 and account for 1.4 million SMEs, representing 8.5 million jobs. Employment in EU IP-based or “knowledge-economy” industries increased by 24 percent between 1996 and 2006 compared to 6 percent for other industries.<sup>89</sup>

### **Understanding the State of IP Protection among T-TIP Parties**

Unfortunately, several EU member states currently have poor IP protection records. USTR’s *Special 301 Report* evaluates annually the IP protection of countries around the world, and places those countries that do not provide “adequate and effective” IP protection for U.S. IP rights holders on either the Priority Watch or the Watch List.<sup>90</sup> The 2013 *Special 301 Report* places Bulgaria, Finland, Greece, Italy and Romania on the Watch List. Bulgaria was added to the list in 2013, Finland in 2009, Greece in 2008, Romania in 1998, and Italy since the report’s inception in 1989. If the T-TIP is truly to be a 21<sup>st</sup> century trade agreement, it cannot permit EU member states to practice policies that constantly place them on USTR’s *Special 301 Report*.

For its part, Bulgaria was added to the 2013 Watch List because Bulgaria “has taken only limited steps to address persistent U.S. concerns regarding IPR infringement. Piracy over the Internet in Bulgaria remains a serious and growing concern. Numerous online infringing services operate in the market and enforcement actions have seldom resulted in convictions.”<sup>91</sup> Finland remains on the list because of a lack of patent protection for certain pharmaceutical products, while Greece needs to “implement legislation and regulations that provide administrative fines for software infringement...and take steps to ensure that it has effective legal mechanisms to address piracy over the Internet.”<sup>92</sup> Italy’s persistence on the list stems from issues with piracy over the Internet, with “several content industries reporting that Italy has among the highest rates of online piracy in the world.”<sup>93</sup> Finally, Romania also needs to address serious issues of piracy and counterfeiting and “take steps to address concerns over judicial delays and a lack of deterrent-level sentencing.”<sup>94</sup>

Another way to view the strength of countries’ IP protection systems is through the Park Index. (See Table 5) The Park Index is a “pioneering study” that constructed a summary index of national IP rights for 110 countries from 1960 to 2005. The Park Index presents the sum of five separate scores for: coverage (inventions that are patentable); membership in international treaties; duration of protection; enforcement mechanisms; and restrictions (for example, compulsory licensing in the event that a patented invention is not sufficiently exploited).<sup>95</sup> The Park Index was designed to provide an indicator of the strength of patent protection in countries (though not the overall quality of countries’ progress at

strengthening their IP rights systems).<sup>96</sup> It provides a useful tool for measuring countries' progress at strengthening their IP rights systems. The Index shows that the United States offers the strongest IP protection among the T-TIP parties, followed by a tie between Belgium, Denmark, Finland, France, Italy, Ireland, and the Netherlands. The greatest growth was in the Czech Republic and the Slovak Republic, which experienced increases of nearly 35 percent and 53 percent, respectively, in their Park Index ratings between 2000 and 2005. The positive improvement over the last decade in many of the newly emerged Central and Eastern European countries (CEECS) is a promising sign for moving forward with strong IP protections in the T-TIP.

| Country        | Park Index (2005) |
|----------------|-------------------|
| United States  | 4.88              |
| Belgium        | 4.67              |
| Denmark        | 4.67              |
| Finland        | 4.67              |
| France         | 4.67              |
| Italy          | 4.67              |
| Ireland        | 4.67              |
| Netherlands    | 4.67              |
| Bulgaria       | 4.54              |
| Sweden         | 4.54              |
| United Kingdom | 4.54              |
| Germany        | 4.50              |
| Hungary        | 4.50              |
| Portugal       | 4.38              |
| Austria        | 4.33              |
| Czech Republic | 4.33              |
| Spain          | 4.33              |
| Greece         | 4.30              |
| Poland         | 4.21              |
| Slovakia       | 4.21              |
| Romania        | 4.17              |
| Luxembourg     | 4.14              |
| Cyprus         | 3.48              |
| Malta          | 3.48              |

**Table 5: Park Index Rating of Intellectual Property Protections<sup>97</sup>**

### Strengthening IP Protection in the T-TIP

Data exclusivity, trade secret protection, and an increased flow of innovative knowledge are three pressing IP issues that need to be addressed as part of the T-TIP.



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### Data Exclusivity

Data exclusivity protects the investment needed to prove the safety and efficacy of a biopharmaceutical product, ensuring that the costly clinical trial results and data developed by the biologics' innovator during the drug approval process cannot be used (during the 12-year period ensuing drug approval) by competitors to secure approval for a third-party product. While the European Union has enacted a 10-year data exclusivity period (and provides an eleventh year for significant new indications approved within the first 8 years after approval) for both new chemical entities and new biological entities before generic copies or biosimilars can be approved, failing to harmonize at 12 years of data exclusivity will cause U.S. firms to lose protections already granted under U.S. law. Thus, USTR should be negotiating toward that standard.

In addition, though it is undoubtedly important that citizens worldwide have access to affordable medicines, it is worth noting that 98 percent of the drugs on the World Health Organization (WHO) Essential Medicines List are already off-patent. This includes those treating the most common causes of mortality in developing countries. Furthermore, the Doha Declaration put in place measures to provide access to medicines in case of national emergencies.<sup>98</sup> But it is also critical that medicines exist to treat a wide variety of diseases and conditions; and that requires substantial investment in biopharmaceutical R&D. Thus, it is vital that a system be structured that affords innovators with fair incentives to invest in biological R&D while at the same time ensuring reasonable patient access, in developed and developing countries alike, to biologic medicines. With medicines, interested parties must be both concerned about addressing current challenges using the medicines available today, as well as concerned with continuing to invest in solutions to diseases and conditions which have not yet been solved. Doing so requires preserving incentives to invest in biomedical research. Therefore, the United States and the European Union should be at the forefront of this fight by upholding 12 years of data exclusivity for biologics.

### Trade Secret Protection

Trade secrets, or “know-how,” are critical to the competitiveness of firms in innovation industries. For example, one estimate placed the value of trade secrets owned by U.S. companies at \$5 trillion.<sup>99</sup> Trade secrets are especially important to start-up companies and small business enterprises because, unlike patents, they can be protected without registration or formalities. But once disclosed, trade secrets lose all their value to their owners. So they must be carefully protected, especially as competitors are eager to get access to them and some foreign governments are becoming adept at forcing the disclosure of sensitive information to advance national policy goals.

Today, trade secrets are protected more effectively in the United States than in the European Union. This is primarily because there is no common legal framework that allows companies to enjoy the same level of trade secret protection across all the different EU member states.<sup>100</sup> Even if levels of protection are high in some EU member states—such as Sweden—this fragmentation is ultimately negative. From the firm's perspective, the varied legal regimes make trade secret enforcement across the EU unclear and expensive to pursue. For example, before evaluating the legal remedies available, identifying what is

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protectable as a trade secret in different member states presents a difficult task. More importantly, from the perspective of policymakers, this ambiguity impacts the likelihood of enterprises to invest in innovation in the EU market.

In the United States, an informal source of law, the Uniform Trade Secrets Act (USTA), played a vital role in harmonizing the legal protection of trade secrets across the different U.S. states.<sup>101</sup> The USTA is considered informal because it was drafted by a nonprofit law commission that promotes the enactment of uniform acts in areas of state law where harmonization is missing, and desired. States are free to enact the USTA as they see fit, and as of 2013, 47 of 50 U.S. states have done so, as well as the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.<sup>102</sup>

But within the EU, Sweden is the only country with specific ad hoc legislation addressing trade secrets.<sup>103</sup> The other member states offer protection to trade secrets through different pieces of civil and criminal legislation. For example, Austria, Germany, Poland, and Spain rely on unfair competition law, while Italy and Portugal have specific provisions on the protection of trade secrets included in their respective Codes of Industrial Property.<sup>104</sup> Common law countries such as the UK and Ireland, lacking any specific legislation, use common law of confidence and contract law to protect trade secrets.<sup>105</sup> Most importantly, Bulgaria, the Republic of Ireland, Malta and the United Kingdom do not provide criminal provisions regarding the protection of trade secrets.<sup>106</sup>

To address this issue, the T-TIP should first require the adoption of a common definition for trade secrets: any information that has economic value (actual or potential), is not generally known to the public, and for which the trade secret owner has taken reasonable measures to keep private. In addition, the European Union, like the United States, needs to criminalize the willful theft of trade secrets across its entire market. The law should make the misappropriation of a trade secret a criminal offense if it is done intending or knowing that: 1) the misappropriation will harm the trade secret owner; 2) the misappropriation will benefit any government, instrumentality, or agent, or 3) the person who misappropriates the trade secret attempts to aid or abet another person with the trade secret.

Further, the T-TIP should build on the product certification provisions included in Section 9 of the Korea-United States Trade Agreement (KORUS) and Article 5 of the WTO Agreement on Technical Barriers to Trade by placing the burden on T-TIP parties to clearly and thoroughly justify the submission of trade secrets as part of their product approval requirements. This approach would minimize unnecessary demands for trade secrets as a condition of market access, while ensuring that any justified demands are coupled with the right of affected business entities to promptly appeal the request for such information to a separate regulatory body. This will make the T-TIP the standard for all trade agreements going forward by preventing nations from pressuring foreign companies to “disclose sensitive information as a requirement for setting up a joint venture” or “as a condition of investing.”<sup>107</sup>

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*The European Union, like the United States, needs to criminalize the willful theft of trade secrets across its entire market.*

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## Free Movement of Knowledge

An open knowledge economy is critical to the long-term competitiveness of the transatlantic market. However, in today's global economy, products are developed in an increasingly cross-border manner. In light of this shift, it is important that IP laws be reviewed to ensure that they do not unnecessarily restrict such mutually beneficial cross-border collaboration.

The knowledge from U.S. and EU workers in science, technology, engineering and mathematics (STEM) and the innovation that results from it needs to be easily transferable between separate legal entities across country borders within an organization, in a manner that ensures full protection but without any unnecessary regulatory restrictions. In addition, those with STEM degrees often are involved in transatlantic R&D projects that require regular, in-person interaction with employees at other sites. Too often, however, visa applications take an unreasonable amount of time to process and these delays restrict business activities. The T-TIP presents an opportunity to modernize the rules that guide workforce mobility for employees with STEM degrees.

Moreover, U.S. and EU statutory R&D programs require a free-flow of knowledge. But cross-border restrictions can impede the flow of this collaboration across the Atlantic. Thus, companies participating in pre-competitive research should be able to freely transfer ownership and access rights for IP to foundation affiliates across and between the European Union and the United States. In addition, there should be more flexible transfers of IP among joint venture partners on either side of the Atlantic Ocean.

Finally, the T-TIP needs to strengthen the existing collaboration between and among American and European universities and research institutions and the private sector. The agreement could enhance the potential for transatlantic innovation by allowing U.S. entities—commercial and academic—to participate on terms equal to those applied to EU entities in Horizon 2020, and likewise allowing EU entities to similarly participate in U.S. programs. Once a bilateral R&D participation model is established, it could serve as a fruitful mechanism to coordinate pre-competitive research by leveraging the different strengths and knowledge bases of universities and research institutions in the United States and the European Union.

## CONCLUSION

The T-TIP has the potential to be the most innovation-empowering trade agreement ever signed. Ideally, the T-TIP would eliminate all barriers to trade; however, this may be difficult to achieve. Thus, it is critical to ensure that the most progress is made in areas that stimulate innovation. These include eliminating all tariffs on trade in high-tech products; curtailing non-tariff trade barriers; strengthening digital trade; lowering barriers to foreign direct investment; facilitating the cross-border funding of research and development; promoting non-discriminatory government procurement; encouraging market-based competition; and protecting intellectual property. In doing this, not only will the European Union and the United States enable robust innovation-enhancing trade and investment, they will form an alliance against mercantilist practices, and demonstrate continued commitment to the principles of free and fair trade.

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The threat posed by innovation mercantilism is not going away. If the European Union and the United States want to point the way forward for the global trade agenda, they need to demonstrate that innovation and market-based trade is instrumental to economic growth. By empowering U.S. and EU enterprises and spurring innovation and productivity, the T-TIP can ensure that the long-term strategic interests of the transatlantic economy are realized. But if the agreement ends up being bogged down in negotiations over consumer or agricultural products, the United States and the European Union are in danger of losing their innovation leadership position in the global economy to those countries that choose the innovation mercantilist path.

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