

# The 10 Worst Innovation Mercantilist Policies of 2013

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*“Innovation mercantilist” nations think that achieving prosperity occurs through expanding technology exports—in other words, by distorting the international trading system through a number of mercantilist practices.*

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Innovation is a central driver of growth. As a result, an increasing number of countries are seeking to become innovation leaders. Unfortunately, the methods that many choose are grounded in “innovation mercantilism”: a strategy that sees technology-based exports as the key to success while relying on distortive and protectionist tactics. The global economic system has become increasingly distorted over the last decade as more and more nations adopt mercantilist policies to grow and attract innovation-based high-wage industries.

As nations have been pressed to reduce tariff barriers, many have turned to an array of mercantilist non-tariff practices, including discriminatory technology standards, export subsidies, forced technology transfer, weak intellectual property (IP) protection, and the favoring of indigenous over foreign technology products and services in government procurement.

These innovation mercantilist practices do not just damage other economies; they damage the entire global innovation system, leading to less innovation and productivity. Moreover, they often do not even help the countries embracing the practices; instead, mercantilist policies lead them to neglect the greater opportunity to spur growth by raising the productivity of all sectors of their economies, not just a few high-tech ones.

This first annual report documents what ITIF believes to be the ten worst innovation mercantilist practices proposed, drafted or implemented in 2013. Only one policy was chosen per country in order to document the pervasive nature of innovation mercantilism globally.

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## Summary of Worst Mercantilist Policies in 2013:

- **China:** Scuttled the Information Technology Agreement through a refusal to compromise.
- **Vietnam:** Implemented localization requirements on Internet service companies.
- **Argentina:** Expanded its “trade balancing” policies.
- **Brazil:** Prepared legislation that implements local data storage requirements for Internet service companies.
- **Uruguay:** Implemented local content requirements for the construction of wind farms.
- **Russia:** Initiated local content requirements for pharmaceutical production.
- **India:** Issued a patent denial for the cancer drug Glivec and a patent revocation for the cancer drug Tykerb.
- **Australia:** Prohibited overseas storage of electronic health records.
- **Canada:** Developed a trend of invalidating life science patents for a failure to fulfill the “utility” requirement.
- **Ukraine:** Listed by the United States Trade Representative as a Priority Foreign Country on the *Special 301 Report*.

## THE NATURE OF INNOVATION INDUSTRIES

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>1</sup> Innovation—the implementation of a new or significantly improved product, service, process, or organizational method—has become the central driver of economic well-being and competitiveness for many economies.<sup>2</sup> Innovation also plays an indispensable role in helping address challenges, such as developing sustainable sources of food, improving education, combating climate change, meeting the needs of growing and aging populations, and increasing incomes.

But innovation doesn’t just fall like manna from heaven. In most cases it requires businesses to marshal resources and take risks. What then are the attributes that define these innovative businesses and by definition innovation industries? First, true innovation industries are ones for which 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.

Second, the marginal cost of selling the next product or service is significantly below the average cost in innovation-based industries. The digital content industry (e.g., software,

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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.

Finally, innovation industries depend more than other industries on intellectual property, particularly science and technology-based IP. For example, software depends on source code; life sciences on discoveries related to molecular compounds; aerospace on materials and device discoveries; and the content industries on digital copy-written content.

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1. Ensuring the largest possible markets: For innovation industries with high fixed costs of design and development but lower marginal costs of production, larger markets are critical; they enable firms 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 20 countries rather than five, expanding their sales by a factor of four, their total costs increase by much less than a factor of four. 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>3</sup> But a host of different innovation mercantilist policies act to limit global market size either at the enterprise or establishment level.
2. Limiting 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.<sup>4</sup> Some mercantilist policies—including discriminatory government procurement, protected state-owned enterprises, and government bailouts—enable weak firms to enter into or remain in a market, drawing off sales from stronger firms and reducing their ability to reinvest in innovation.
3. Ensuring strong IP protections: Firms in innovation-based industries depend on intangible capital, much of it intellectual property. By raising the private rate of return closer to the social rate of return, intellectual property protection addresses the knowledge-asset incentive problem, allowing inventors to realize economic gain from their inventions, and thus reinvest in 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.

It is in this context that innovation mercantilist policies are so damaging, for they not only are growing but they negatively impact the most important sectors of the global economy. The following ten innovation mercantilist policies are just a sampling of unfair trade

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practices that nations undertook in 2013 and that the global trading system needs to address as a top priority.

### **China Scuttles the Information Technology Agreement**

On November 21, 2013, talks to expand the Information Technology Agreement (ITA)—a World Trade Organization (WTO) agreement that eliminated tariffs on a variety of technology products—broke down when China refused to reduce the number of goods it wished to exclude from the agreement.<sup>5</sup>

The 50 countries participating in expanding the agreement wished to update it with the latest technology products so that the benefits of tariff-free trade could accumulate for all countries. The talks initially put about 250 products for duty-free treatment on the table, while China had about 140 on its “sensitivities” list, which included items for longer tariff phase-out periods, and sought to exclude 57 product lines entirely.<sup>6</sup> China refused to make concessions on any of the 57 products, even those for which it is not the main global producer (e.g., multi-component semiconductors), and talks collapsed.

There is little doubt that China’s participation in the ITA has significantly benefited the country, deepening its role in global value chains, boosting its exports of information and communication technology (ICT) goods and services, and boosting the innovation capacity of Chinese firms, including those in its manufacturing sector.<sup>7</sup> Despite this, the Chinese government sought short-term gains to its IT producers from tariffs.

China’s recalcitrance will keep tariffs high on a number of newly developed innovative technology products. And tariffs on these products (e.g., semiconductors) hurt not just present consumers of them but future ones as well, as tariffs will reduce global market size and balkanize production. As a result, there will be reduced revenues for reinvestment back into the next round of innovation. Moreover, by raising costs on key IT capital goods, these tariffs reduce the degree to which businesses and consumers use these key innovation and productivity-enabling technologies. Perhaps upon deeper inspection, China’s leaders will recognize the win-win-win promise that broad ITA expansion holds for China, other nations (developed and developing alike), and the broader global economy.

### **Argentina Embraces “Trade Balancing”**

On December 3, 2013, Argentinian President Cristina Fernandez de Kirchner raised the credit card tax on purchases made in a foreign currency from 20 percent to 35 percent in order to limit purchases of foreign goods and services.<sup>8</sup> The tax functions like a tariff at the individual level—it prevents global producers from having access to the Argentinian market through a penalty on their customers.

This policy builds upon past Argentinian mercantilist policies focused on “trade balancing.” The trade balancing requirements force sellers of foreign-made cars, for example, to become exporters of everything from bio-diesel to bottled water in return for access to Argentina’s auto market.<sup>9</sup> Like tariffs, these non-tariff barriers (NTBs) are designed to keep foreign products out of domestic markets, which can limit the efficient market size for industries.

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In 2012, foreign firms operating in Argentina began reporting that applications for import licenses were often not approved unless they were accompanied by a plan to export goods from Argentina of equivalent value to those that are being imported.<sup>10</sup> Worse, these “trade balancing” policies are not codified in Argentinian law, making it hard to bring WTO disputes. Rather, Argentinian officials communicate them informally to foreign companies. Nonetheless, in January 2013, the United States, the European Union and Japan requested that the WTO establish a dispute settlement panel to investigate Argentina’s discriminatory import procedures, including those of trade balancing, due to the potential violations of the 1994 General Agreement on Tariffs and Trade and the Import Licensing Agreement.<sup>11</sup>

### **Vietnam Implements Localization Requirements with Decree 72**

On September 1, 2013, Vietnam’s Decree 72 implemented localization requirements mandating that companies providing Web search portals, cloud computing services, or digital media operate at least one data center in Vietnam.<sup>12</sup> In addition, the law will restrict all use of websites and online social media to the exchange of “personal information” only, banning the distribution of “general information” or any information from media outlets (including state-owned outlets).

This law is purportedly motivated by, or at least justified on the basis of, privacy concerns. The claim 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. As ITIF has shown in the *False Promise of Data Nationalism*, data are no more likely to be secure or insecure in Vietnam than anywhere else in the world.<sup>13</sup> Data breaches can occur anywhere. The second issue, privacy, is just as flawed. The location of servers has absolutely no effect—for good or bad—on privacy, as the local government would still have legal jurisdiction over companies who own the data, regardless of where their data are actually stored.

Decree 72’s requirement directly violates the country’s computer and related services commitments under the WTO General Agreement on Trade in Services (GATS). Moreover, it hinders the expansion of digital trade markets, important because information and communication technologies are the global economy’s strongest driver of productivity, innovation and growth.<sup>14</sup>

### **Brazil Considers Legislation That Implements Localization Requirements for Internet Service Companies**

In September 2013, Brazil began considering a policy that would require Internet service companies, such as Google and Facebook, to set up local data storage centers. According to Brazilian Internet Policy Secretary Virgilio Almeida, the Brazilian government might also design the policy to force companies to store sensitive data such as tax information within the country.<sup>15</sup>

As a pending piece of legislation states, “The Executive Branch, through Decree, may force connection providers and Internet applications providers provided for in art. 11, who exercise their activities in an organized, professional and economic way, to install or use structures for storage, management and dissemination of data in the country, considering

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the size of the providers, its sales in Brazil and breadth of the service offering to the Brazilian public.”<sup>16</sup>

In a similar manner to Vietnam’s Decree 72, this proposed legislation will hinder the expansion of digital trade markets. Establishment-level barriers, such as Brazil’s possible decree, allow foreign firms to access markets, but compel them to locate production facilities in the market. ICT firms may only need a few data centers globally, but if nations like Brazil require local data centers, the cost of providing this service (and the price to consumers) will increase. In fact, it has been reported that it costs 40 percent more in Brazil to build a data center than it would to build one in the United States.<sup>17</sup> Since many firms in Brazil are now choosing to outsource their data servers because of this cost, the policy is seen as a way to force a reversal, which will have the effect of raising the cost of IT services in Brazil.

### **Uruguay Applies Local Content Requirements to the Construction of Wind Farms**

In September 2013, Uruguay began to impose local content requirements (LCRs) on the construction of wind farms, stipulating that for foreign bids to be considered, “the domestic inputs that constitute the investment must reach at least 20 percent of the total amount of the investment made for the construction of the wind farm, regardless of the infrastructure work necessary for their insertion in the energy grid.”<sup>18</sup>

LCRs mandate that a certain percentage of goods or services sold in a country must be produced with local content.<sup>19</sup> This LCR balkanizes the market for wind farm construction by explicitly pressuring foreign enterprises to locate economic activity in Uruguay. Clean energy is an innovation industry, and as discussed above, policies like these limit the efficient market size for such an industry. Primarily, it will keep unit costs for wind farm inputs high, thereby reducing the potential revenue earned from the project and needed to invest in the next generation of innovation. In addition, the high unit costs will limit the adoption of wind farms across Uruguay, resulting in less clean energy generated.

### **Russia Initiates Local Content Requirements for Pharmaceuticals**

Not content with trade, in February 2013, Russian government officials called for more local production of pharmaceuticals, including those with foreign active ingredients and formulations. In particular, the Russian government drafted proposed legislation that would restrict public procurement to domestic drugs in cases where there are two or more domestically produced medicines within the same product category available.<sup>20</sup> Given that public procurement of drugs constitutes 30 percent of drug purchases in Russia; this policy is likely to have a major impact on pharmaceutical trade.<sup>21</sup>

Russia is doing this because the government’s long-term pharmaceutical industry development plan calls for Russian manufacturers to account for at least 48 percent of total sales (based on value) by 2020 and to have 90 percent of strategically important medicines produced in Russia by 2018.<sup>22</sup> Rather than do what other nations are doing to win in biomedical innovation (e.g., funding life sciences R&D and training scientists), Russia is turning to innovation mercantilism.<sup>23</sup>

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This type of LCR relies on creating excess, inefficient competition, by propping up domestic pharmaceutical enterprises at the expense of higher quality and/or more efficient foreign ones. This is by definition true, because if Russian pharmaceutical providers were in fact providing products of superior value, they would not need these artificial market restrictions. This policy allows weak pharmaceutical firms to enter into or remain in a market, drawing off sales from stronger foreign firms and thereby reducing their ability to reinvest in costly innovation for new, life-saving medicines.

### India Engages in Patent Revocation and Denial

On April 1, 2013, the Indian Supreme Court denied a patent for the cancer drug Glivec. Novartis, the company that produces Glivec, had never been issued a patent for the drug in India. In 2006, India's patent office ruled against awarding a patent to Glivec, arguing that the drug's active ingredient, imatinib mesylate, was already known before Glivec's development.<sup>24</sup> Several rounds of appeals later, Novartis lost the case for its innovative drug in 2013. However, in the United States and Europe, Glivec still is under patent because it fulfilled the WTO standard of being new, involving an inventive step and being useful. As a result, the Indian Supreme Court's refusal to issue a patent to Glivec, in direct contrast with the drug's experience in other OECD nations, in effect provides Indian generic companies the opportunity to produce the drug themselves. This allows them to earn a profit without incurring the costs of the drug's development, and is tantamount to weak firms drawing off sales from stronger firms and reducing their ability to reinvest in drug innovation.

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In July 2013, India revoked a patent for the cancer drug Tykerb, a derivative salt of GlaxoSmithKline's lapatinib, which is used to treat women with advanced breast cancer. According to the Indian Intellectual Property Appellate Board, the drug did not provide sufficient "enhanced therapeutic efficacy" over the underlying patented drug lapatinib to justify further intellectual-property protections.<sup>25</sup> This decision, in addition to the one above it, is not about the enhanced clinical efficacy (this drug has a patent in several OECD countries) but rather about giving the Indian generic industry the ability to produce this drug at a lower cost in order to reap domestic, and possibly international, profits.

Both of these decisions set a harmful precedent worldwide regarding the requirements and conditions for receiving a patent. In fact, according to India's 2005 amended patent protection act, pharmaceutical companies have to prove significant clinical efficacy enhancements of their drugs over already-patented compounds. Most OECD nations do not have this additional requirement of significant clinical efficacy, and instead adhere to the WTO standard of new, non-obvious, and useful. However, India's law, and its various applications in 2013, may have the effect of limiting the patentability of potentially beneficial innovations. Such innovations would include drugs with fewer side effects, decreased toxicity, or improved delivery systems. In fact, the decisions appear to confirm that India's law creates a special, additional criterion for pharmaceuticals, which could preclude issuance of a patent even if the applicant demonstrates the WTO standard of being new, involving an inventive step, and being capable of industrial application.<sup>26</sup>

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## Australia Prohibits Overseas Storage of Electronic Health Records

In November 2011, Australia's government presented a bill that would require that local data centers be used in the provision of personally controlled e-health record systems (PCEHRs). PCEHRs are shared electronic health summaries for Australian citizens that provide a secure electronic summary of a patient's medical history—including information such as current medications, adverse drug reactions, allergies, and immunization history—in an easily accessible electronic format.<sup>27</sup> After its implementation in 2012, it became the most scrutinized e-health policy in 2013, as various organizations took to the Internet to both applaud and criticize it.<sup>28</sup>

This rule on health records essentially applies a blanket requirement that certain personal data be stored in-country.<sup>29</sup> Like Decree 72 in Vietnam, the law is justified on the basis of privacy concerns. However, as stated above, data breaches can occur anywhere, and regardless of the location of the servers, a local government will have jurisdiction over companies who own the data. In fact, according to the Consumers e-Health Alliance (CeHA), Australia lacks a “workable national ICT infrastructure...that will deliver an e-health system for the future.”<sup>30</sup> As a result, since ICT firms may only need a few data centers globally, the cost of providing this service (and the price to consumers) increases when nations like Australia force them to locate in country.

## Canada Embraces the “Promise Doctrine”

In Canada, there is an odd pattern developing involving the utility condition for patents: since 2005, Canadian courts have revoked 18 patents for failing to meet the “usefulness” requirement, including the ADHD drug Strattera and the Schizophrenia drug Zyprexa. In 2013, Eli Lilly filed a North American Free Trade Agreement notice of arbitration against Canada for its decision.

The patent revocations are occurring due to retroactive examinations of the utility (usefulness) condition under the “promise doctrine”—established in 2010 by the Canadian Federal Court of Appeals—which requires that a patent meet heightened requirements for usefulness: innovators must demonstrate, or “soundly predict,” a “promise” of the patent to prove the usefulness requirement has been met. Essentially, the promise doctrine states that in order to constitute a useful (and therefore patentable) drug, a drug must not only be useful for some purpose (the standard in the United States and Europe), but it must also deliver exactly the purpose promised in the patent filing. In other words, the doctrine establishes an impractical evidentiary burden since it is impossible to predict at the date of filing how specifically useful a patent is or isn't going to be.

This Canadian precedent threatens the international intellectual property system that drives drug creation and development around the world. This doctrine will reduce revenues for foreign pharmaceutical producers, reducing the amount they can reinvest in new drug development.<sup>31</sup> But these sales, enabled by the existence of the patent, would have allowed pharmaceutical companies to recover the costs of clinical drug development for reinvestment in the next round of innovative medicines. The threat of patent revocation reduces the incentive for innovative pharmaceutical companies to take on the risks of drug



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development. Worse, it poses a very real risk to patients and families who rely on this process for the development of new medicines and cures.

### Ukraine Becomes a “Priority Foreign Country”

In 2013, Ukraine was listed as a Priority Foreign Country (PFC) by the United States Trade Representative (USTR) in its *Special 301 Report*, an annual review of countries that provide unsatisfactory intellectual property rights protection policies.<sup>32</sup> According to USTR, “this designation is the culmination of several years of growing concern over widespread IP [intellectual property] theft, including the growing entrenchment of IPR infringement that is facilitated by government actors.”<sup>33</sup>

Most of the concerns regarding Ukraine are related to the availability of counterfeit goods; widespread, admitted use of infringing software by government entities; and a persistent failure to implement an effective system of combating online piracy. All of these issues represent problems for international trade in general. In fact, according to USTR, “the acts, policies, and practices described as the grounds for PFC have cumulatively resulted in...foregone market opportunities and the impact on the markets in other countries...the situation in Ukraine appears to have worsened rather than improved in 2012.”<sup>34</sup>

The Ukrainian policies set a damaging precedent for other middle income countries that wish to develop their own robust copyright sectors, because they encourage piracy. They also hurt the Ukrainian economy because they discourage innovation in content, as well as innovation in content delivery methods, that could bring profits to Ukrainian innovators. Finally, they hurt knowledge-intensive developed countries around the world, which rely upon the export of IP intensive content to markets like Ukraine.

### CONCLUSION

As innovation and trade policy have become increasingly intertwined, openness to trade—characterized by open market access and receptivity to foreign direct investment—has become a bedrock pillar of effective global innovation policy. But all too often, countries are electing to pursue mercantilist, trade-distorting, beggar-thy-neighbor approaches instead of implementing productivity and innovation-enhancing policies.<sup>35</sup>

The global trading system has the potential to be the most innovation-empowering it has ever been in its history. However, the threat posed by innovation mercantilism is not going away any time soon. If the global trade system is to maximize innovation, all nations should be strongly advocating for the correct policies. These include eliminating all tariffs on trade in high-tech products; curtailing non-tariff trade barriers; strengthening digital trade; encouraging market-based competition; and protecting intellectual property. In doing this, countries will not only enable robust innovation-enhancing trade and investment, they will begin to form an alliance against mercantilist practices to demonstrate continued commitment to the principles of free and fair trade.

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