

The Worst Innovation Mercantilist Policies of 2014

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Innovation mercantilist practices do not just damage other economies; they damage the entire global innovation system, leading to less robust rates of growth in innovation and productivity.

Innovation is a central driver of economic growth. Because of this, an increasing number of countries are seeking to become innovation leaders. Unfortunately, the methods many choose are grounded in “innovation mercantilism”: a strategy that works to improve trade balances in technology-based industries by using a range of protective trade practices. Accordingly, the global economic system has become increasingly distorted over the last decade as more and more nations adopt innovation mercantilist policies 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.¹

These innovation mercantilist practices do not just damage other economies; they damage the entire global innovation system, leading to less robust rates of growth in innovation and productivity. Moreover, innovation mercantilist policies all too often lead their practitioners to neglect the greater opportunity to spur growth by raising the productivity of all sectors of a country’s economy, not just a few high-tech ones.

This second annual report documents what ITIF believes to be the worst innovation mercantilist practices proposed, drafted or implemented in 2014.² Policies were chosen based on their global detrimental effects, so some nations were listed twice due to the widespread nature of the impact of their mercantilist practices.

SUMMARY OF WORST MERCANTILIST POLICIES IN 2014:

- **China:** Abused its anti-monopoly law by instigating capricious investigations against foreign multinationals in order to protect domestic firms.

- **China:** Threatened the long-term viability of the global solar industry through massive and unfair subsidies to Chinese-owned solar companies.
- **India:** Issued a patent rejection for the cancer drug Abraxane.
- **India:** Introduced new telecommunications equipment tariffs.
- **Indonesia:** Prepared legislation that requires foreign Internet companies to store user data locally.
- **Nigeria:** Proposed “Guidelines for Local ICT Content Development.”
- **Russia:** Implemented localization requirements on Internet service companies.
- **Spain:** Passed legislation taxing Internet news aggregators for publishing snippets of articles in search results.

THE NATURE OF INNOVATION INDUSTRIES

In recent years, a growing number of economists have come to see that it is not so much the accumulation of capital but rather innovation that drives countries’ long-run economic growth.³ Innovation—the implementation of a new or significantly improved product, service, process, business model, or organizational method—has become the central driver of economic well-being and competitiveness for many economies.⁴ Innovation also plays an indispensable role in helping address global 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—and governments—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 such as 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 of producing it in innovation-based industries. 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.

Finally, innovation industries depend more than other industries on intellectual property, particularly on 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.

As a result, to maximize innovation by innovation industries, the global trading system needs to get three key factors right:

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 twenty countries rather than five, expanding their sales by a factor of four, their total costs increase by much less than a factor of four. That's 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.⁵ 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.⁶ 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.⁷

To maximize innovation by innovation industries, the global trading system needs to get three key factors right: 1) ensuring the largest possible markets; 2) limiting non-market-based competition; and 3) ensuring strong IP protections.

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 innovation mercantilist policies are just a sampling of unfair trade practices that nations proposed in 2014 and that the global trading system needs to address as a top priority.

China Abuses Its Anti-Monopoly Law to Protect Domestic Firms

In 2014, China began a surge of anti-monopoly investigations designed to target foreign firms and protect domestic ones.⁸ Dozens of foreign enterprises—including U.S. technology firms such as Microsoft and Qualcomm, Korean and Taiwanese LCD screen producers, Japanese ball bearing companies, and American and German car firms such as Chrysler and Volkswagen—are being probed for charging excessive prices, abusing market

position, and creating vertical monopolies.⁹ Indeed, the United States-China Business Council reports that 86 percent of its firms surveyed expressed some level of concern about competition enforcement activities in China.¹⁰

China is using its weak rule of law regarding anti-monopoly in order to discriminate against firms from particular foreign countries in potential violation of its World Trade Organization and other commitments. Indeed, as ITIF wrote in *Enough is Enough: Confronting Chinese Innovation Mercantilism*, China's economic strategy consists of both developing and supporting industries that can expand exports and doing this in a way that ensures Chinese-owned firms win.¹¹ Foreign companies, business associations, and home governments have expressed considerable concern about the way Chinese regulators from bodies such as the National Development and Reform Commission (NDRC) have been gathering evidence, the lack of procedural transparency, and what they perceive as strong-arm tactics against corporate executives, legal representatives, and even translators.

These practices damage foreign firms at the expense of domestic ones while balkanizing markets. Making it more difficult for foreign firms to operate in China reduces the possibility for increased global revenues that are necessary for many of these innovative firms to reinvest in the next generation of innovation. In addition, practices such as these are designed to unfairly make China's enterprises more competitive domestically. If the Chinese firms were truly competitive with the foreign ones being targeted, they would not need artificial market restrictions in order to operate.

China Threatens Long-Term Innovation in the Global Solar Industry

Beginning in earnest in 2009, artificially cheap Chinese solar products flooded both the global and U.S. markets, in turn significantly reducing solar manufacturing in developed nations. For example, China went from exporting very few solar products to the United States before 2009 to shipping 49 percent of the solar panels deployed in America in 2013.¹² Over 25 U.S. solar manufacturers have gone bankrupt or been forced to lay off workers since China revved up its "green mercantilism."¹³

Because of this green mercantilism, in 2012, the Department of Commerce levied tariffs on Chinese solar imports.¹⁴ Throughout 2013 and 2014, however, Chinese solar cell producers exploited a loophole left in these tariffs and outsourced solar cell manufacturing to Taiwan, allowing Chinese solar manufacturers to still export to the United States duty free.¹⁵ As a result, in 2014, the Department of Commerce made the appropriate decision in choosing to levy new tariffs ranging from 18 percent to 35 percent on Chinese solar imports whose production included third-country assembly incorporating Chinese inputs.¹⁶ The tariffs are expected to increase the cost of Chinese crystalline solar exports by at least 14 percent, erasing the artificially competitive edge China holds over U.S. manufacturers.¹⁷ Unfortunately, if China continues to hinder solar innovation, the industry may not only be locked into first-generation solar technology, but may also get locked into long-term decline.

The rise of China's solar industry has failed to produce significant innovations in new solar technologies. Rather, it has locked in first-generation crystalline-silicon panels. The top

seven Chinese solar manufacturers invest, on average, a mere 1.25 percent of sales back into R&D.¹⁸ That's over 16 times less than biotechnology firms, or six times less than electronics firms.¹⁹ The lack of investment shows: Chinese clean energy firms patent 72 percent less than U.S. firms, with most of their energy-related patents going toward mature fossil fuel technologies.²⁰ China also only produces 0.36 patents in clean energy per million residents, ranking it 41st out of 50 nations studied by the Organization for Economic Cooperation and Development (OECD).²¹ China's actions are artificially propping up domestic companies at the expense of foreign ones. Unfair competition policies such as this enable weaker firms to enter into or remain in a market, draining sales from stronger firms and reducing their options to reinvest in innovation. The United States must continue to aggressively fight this solar trade war with all means necessary. Not taking action is irresponsibly shortsighted and threatens the long-term viability of the global solar industry.²²

India, Once Again, Engages in Patent Rejection

In 2013, the Indian Supreme Court denied a patent for the cancer drug Glivec as well as revoked a patent for the cancer drug Tykerb, as ITIF wrote in its report *The Indian Economy at a Crossroads*.²³ Once again, in June 2014, the Indian Patent Office refused a patent for the U.S. firm Abraxis BioSciences' anti-cancer drug Abraxane. This is especially concerning because the drug had been patented in both the United States and Europe for fulfilling the commonly accepted World Trade Organization (WTO) standards of being new, involving an inventive step, and being useful.

One of the main grounds under which the patent was rejected is Section 3(d) of India's patent law, which prohibits grant of patents to new forms of known substances unless it results in enhanced efficacy over the known substance. It is the same provision under which Novartis lost protection on its blockbuster anti-cancer drug Glivec last year. India's Patent Office relied on the decision of the Supreme Court in the landmark Glivec case while hearing the application. The Indian Patent Office's refusal to issue a patent to Abraxane stands in direct contrast with the drug's experience in other nations, including those in most OECD nations.

The ruling provides Indian generic companies with 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, consequently reducing their ability to reinvest in life-saving drug innovation.

Moreover, this decision sets 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. In other words, India makes it more difficult for a drug to receive a patent because it must involve an "inventive step." 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 application in 2014, may have the effect of limiting the patentability of potentially beneficial innovations. Such innovations would include drugs

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with fewer side effects, decreased toxicity, or improved delivery systems. In fact, the decision appears 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.²⁴

India Introduces New Telecommunications Product Tariffs

As part of its first budget in July 2014, the Modi Administration included new import tariffs of 10 percent on a range of telecommunications products, such as long term evolution (LTE) products and Voice over Internet Protocol (VOIP) equipment, despite the fact that India committed to eliminating tariffs on these very telecommunications products when it joined the original Information Technology Agreement (ITA) in 1997.²⁵

Unfortunately, this will be particularly harmful for India's economy. As the Indian economists Kaushik and Singh found, for every \$1 of tariffs India imposed on information and communications technology (ICT) products, it suffered a \$1.30 economic loss.²⁶ The tariffs force all ICT-consuming industries in India to acquire more expensive or technologically inferior ICT products.²⁷ Among other impacts, this will slow the deployment and adoption of wireline and wireless broadband in India since telecommunications carriers costs will by definition increase.

Thus, India's new higher tariffs on telecommunications products will hurt not just present consumers, but also future ones, as these tariffs will reduce global market size and balkanize production. Consequently, there will be reduced revenues for reinvestment back into the next generation of innovative products. Moreover, by raising costs on key capital goods, such tariffs reduce business and consumer use of these key innovation- and productivity-enabling technologies. Hopefully, upon deeper inspection, India's leaders will come to see lowering and/or removing these tariffs as the win-win-win promise it holds for India, other nations (developed and developing alike), and the broader global economy.

Indonesia Prepares Legislation That Implements Localization Requirements for Internet Service Companies

In 2014, Indonesia began considering a policy, the "Draft Regulation with Technical Guidelines for Data Centres," that would require Internet-based companies, such as Google and Facebook, to set up local data storage centers.²⁸ The Technology and Information Ministry is on the verge of implementing it under the country's Electronic Information and Transactions (ITE) Law.²⁹ The regulation specifically envisions the construction of new data centers to hold local user data and stipulates building and architectural requirements for them.

Similar to some of the other policies on this list, this proposed legislation will hinder the expansion of markets for digital trade. Establishment-level barriers, such as Indonesia's possible law, allow foreign firms to access markets, but compel them to locate production facilities in the market. The problem with this is that ICT firms may only need a few data centers globally to operate efficiently, but if nations like Indonesia require local data centers, the cost of providing this service (and the price to consumers) will increase.

Nigeria Proposes Guidelines for Localization of ICT Content

In 2014, the “Guidelines for Nigerian Content Development in Information and Communications Technology (ICT)” went into effect.³⁰ Several of the provisions in the Guidelines regard the implementation of procurement restrictions, local content requirements for ICT hardware, the creation of an indigenous development plan, and restrictions on cross-border data flows.

For example, Section 10.1 requires manufacturers to obtain a certification conditioned on assembly of all hardware within Nigeria and furthermore requires “50 percent local content either directly or through outsourcing to local manufacturers” within three years. These conditions will be challenging for many foreign firms to implement given the global nature of their supply and sourcing chains.³¹ Section 12.1.3 requires ICT companies to “host all subscriber and consumer data” locally, and Section 14.1.3 calls for all government data to be hosted “locally inside the country.”³² Finally, Section 3.xxvi references “indigenous manpower” as an element of local content, asking companies to prepare a plan for local job creation and human capital development in the ICT sector.

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All of the policies referenced—local content requirements, indigenous innovation, and restrictions on cross border data flows—rely on creating excess, inefficient competition, which will prop up domestic technology enterprises at the expense of higher quality and/or more efficient foreign ones. This is by definition true, because if Nigerian ICT providers were in fact providing products of superior value, they would not need these artificial market restrictions. This policy allows weak ICT firms to enter into or remain in a market, siphoning off sales from stronger foreign firms, thereby diminishing their ability to reinvest in innovation.

Russia Implements Data Localization Requirements on Internet Service Companies

On September 24, 2014, the Duma, Russia’s lower chamber of Parliament, passed a bill that would force Internet companies such as Google and Facebook to store personal data of Russian users within the country’s borders by January 2015.³³ This initiative is an update to an already passed law that would require local personal data storage by September 2016—in effect, the Russian legislature hopes to move the timeline up. Speaking on the law, the head of the upper chamber of the Russian Parliament stressed that Russian citizens’ personal data would be better protected in the territory of Russia, and that the localization requirement is reasonable given recent international developments.³⁴

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 assertion is true. As ITIF has shown in *The False Promise of Data Nationalism*, data are no more likely to be secure or insecure in Russia than anywhere else in the world.³⁵ 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—Russia, in this case—would still have legal jurisdiction over companies that own the data, regardless of where their data are actually stored.

Spain Passes a Law Taxing Internet News Aggregators

In July 2014, Spain passed a controversial law known as the “Google Tax,” that will force the technology company (and any other company doing news aggregation) to pay newspapers in the country a fee every time it links to their stories.³⁶ The law is technically known as the Canon AEDE (after the organization representing Spain’s largest papers) and states that websites that link to a news article alongside a “meaningful” description will have to pay a fee to the original publisher—a concept that has been the subject of similar, failed, legislation in Germany, Belgium and France.³⁷ This type of mercantilist policy favors domestic producers (Spanish newspapers) over Internet companies, most of which are foreign.

The Spanish law differs from the other, failed, legislation in certain European countries by making the fee more than an obligation. Rather, it is an “inalienable right,” one that overrides any concept of “fair use”—i.e., permitting limited use of copyrighted material without acquiring permission from the rights holders, for use in commentary, search engines or criticism.

Any effective copyright system is about attaining a balance between sharing and innovation and protection; it should prohibit outright theft and piracy but at the same time provide some safe harbor for legitimate digital providers. An example of such a system that generally gets the balance mostly right is the U.S. Digital Millennium Copyright Act (DMCA). Under the DMCA the United States provides safe harbors limiting copyright liability, which help to ensure that legitimate providers of user-generated content sites, cloud computing, and a host of other Internet-related services firms that act responsibly, can thrive online.³⁸ Using copyright law solely to subsidize domestic firms by taxing foreign firms is clearly mercantilist in nature.

LOOKING AHEAD TO 2015

We can’t know with any certainty what practices will be on the *2015 Worst Innovation Mercantilist* list. But we can be sure the list will be a robust one. And in all likelihood, Europe will be on it in 2015. One of the more concerning policy trends of 2014, though not yet implemented in legislative form, was the rise of anti-U.S.-IT sentiment in the European Union. As Juliet Garside writes in *The Guardian*, “Brussels and Berlin are mobilizing to defend ... the digital environment of Europe’s inhabitants; their enemies are the Silicon Valley corporations that seek to dominate it.”³⁹

In Germany, economy minister Sigmar Gabriel called Amazon, Apple, Facebook, and Google examples of “brutal information capitalism,” saying Europe must act now to protect itself. “Either we defend our freedom and change our policies, or we become digitally hypnotized subjects of a digital rulership,” Gabriel warned in a passionate call to action published by the *Frankfurter Allgemeine*.⁴⁰

Like the Russian law above, these ideas are purportedly motivated by privacy concerns. Mathias Döpfner, the CEO of the German media group Axel Springer, wrote in an open letter to Google executive chairman Eric Schmidt, “Google is sitting on the entire current data trove of humanity like the giant Fáfner in *The Ring of the Nibelung*.”⁴¹ As stated

above, data are no more likely to be secure or insecure in the European Union than anywhere else in the world.⁴² Data breaches can occur anywhere. The location of servers has absolutely no effect—for good or bad—on privacy, as local government would still have legal jurisdiction over companies who own the data, regardless of where their data are actually stored.

If the global trade system is to maximize innovation, all nations should strongly advocate for the correct policies. Meanwhile, in France, thoughts abound about taxing the collection of personal data by Internet companies, according to a report from January 2013.⁴³ And several prominent Internet policy thinkers are endorsing the proposal. According to French commentator Félix Treguer, “it’s also the case that the digital economy is fast becoming a very large part of the global economy, yet France’s tax system, and other countries’ tax system, are not adapted to this. In this sense I think it’s legitimate that France is asking itself how it can tax more of the profitable digital activity taking place in France.”⁴⁴ And there are many who believe that Jean-Claude Juncker, the former Luxembourg prime minister who has just been elected as the next president of the European Commission—despite vocal opposition from David Cameron—is out to make an example of Google to show that his administration is defending Europe from the U.S. digital overlords.⁴⁵ Ultimately, if Europe continues to go down this anti-American populist path, Europe will likely appear on ITIF’s 2015 iteration of the “Worst Innovation Mercantilist Policies of the Year” report.

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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.⁴⁶

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. Indeed, all nations should strongly advocate for the correct policies so that the global trading system can maximize innovation. 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 forge an alliance against mercantilist practices to demonstrate continued commitment to the principles of free and fair trade.

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