



Myths vs. Facts about IP, Innovation, and Tech Transfer

Myth: IP rights are a barrier to tech transfer

Fact: Research shows that IP rights *facilitate* tech transfer, not impede them. The UN has even endorsed strong IP rights as one of ten dimensions enabling diffusion of environmentally sound technologies.ⁱ

According to various studies, some of the primary obstacles to technology transfer are high tariff and non-tariff barriers in destination countries. For example, the OECD reported in 2008 that Brazil, Russia, India and China have significant barriers to trade in carbon abatement technology, often levying tariffs above 10 percent on such technology.

Another barrier is a nation's absorptive capacity—its ability to receive, utilize and maintain the physical and human capital needed to employ technology effectively. First among these is the need for a strong legal framework that promotes predictability in terms of IP rights and enforcement. Sufficient human capital, meaning scientists, engineers, and technicians, is also required, as is adequate infrastructure to support the production and operation of advanced technologies.

All of these factors and others have an impact on a company's willingness to transfer or share its technologies, and certainly affects whether investors and financial institutions will provide the capital required to facilitate this sharing.

Myth: IP rights drive up the cost of innovation

Fact: IP rights drive innovation, not the cost of innovation. They reduce the cost of innovation across all sectors by providing a more predictable and less risky environment in which to conduct research, pursue development, and consider the commercialization and marketing of their products and ideas.

This is evidenced particularly in the energy sector based on the World Business Council for Sustainable Development's research stating that "...the royalty cost for energy patents represents a small share of the total investment cost. It argues that the bulk of the cost of bringing a new technology to market relates to the 'soft' aspects, for example operation and maintenance practices, training and organizational procedures, which are not patentable. From their perspective, the real issue for developing countries is not the accessibility of technologies or the price of the patents, but the lack of capital and management."ⁱⁱ

Strong IP rights assure entrepreneurs, inventors and businesses that their hard work, efforts, and investments will be protected if they are successful, and that they will be allowed to earn some return on that investment. This, in turn, allows them to conduct more research and development. Further, because of the transparency built into the patent system, other inventors can learn from their progress, thus helping to advance innovation more broadly and with greater speed to the benefit of mankind. Without strong IP rights, incentives would not exist for people to innovate, or they would treat their inventions as trade secrets and not share them with others, which would also slow down the rate of development.

Myth: The protection of IP has little to no impact on job creation and security

Fact: In the United States, intellectual property is worth over \$5 trillion – more than the nominal GDP of any other country. IP accounts for more than one-half of all U.S. exports, helping drive 40% of the United States' economic growth, and providing 18 million high-paying jobs in America.

The counterfeiting and piracy of America's IP, however, has cost the U.S. hundreds of thousands of jobs, and over \$200 billion annually. Without strong IP rights and effective enforcement, these numbers would skyrocket—cutting deeply into the 18 million jobs—let alone future jobs—of those employed in America's innovative and creative industries. That said, greater enforcement, both domestically and internationally, would help combat this illicit trade and lead to greater job growth in those industries suffering the most from counterfeiting and piracy.

For their part, green jobs are expected to have a major impact on job creation in the future. According to a recent report, however, if the compulsory licensing of green technologies is permitted in any international climate change agreement, America could forfeit 1 million future jobs and large shares of export markets by 2020, with

those numbers increasing exponentially in the years following.ⁱⁱⁱ This is why protecting IP in global climate change talks and other fora is absolutely essential to long-term economic growth, job creation, and innovation.

Myth: The economic and social benefits of IP are not demonstrable

Fact: IP enables the development of technologies that clean our environment, reduce CO2 emissions, generate life-saving medical products, and result in information technology that dramatically improve the quality of life for individuals around the world and aid us in increasing our productivity and efficiency.

A number of highly-regarded studies demonstrate the strong relationship between intellectual property and economic development globally. Research performed by the World Intellectual Property Organization (WIPO) and the United Nations University on six countries found a positive correlation between the improvement of IP systems and economic development, as well as foreign direct investment.^{iv} Analysis conducted by the International Property Rights Index 2009 similarly demonstrates a strong correlation between the protection of IPR and GDP in the 115 countries surveyed.

Myth: IP rights limits the competition for new technology creation

Fact: IP rights don't limit competition; they make it fair by preventing the stealing of ideas and the theft of others' hard work. IP rights also drive competition by assuring those with the best ideas and products that their efforts are guaranteed a reasonable return on investment if they are successful in the marketplace. In any number of IP-dependent sectors—pharmaceuticals, IT, medical devices, and green technology, to name a few—there are multiple producers competing in the marketplace to gain market share and service customers in the most cost-effective manner possible with the most advanced and effective technologies they can devise. Competition is vital to ensuring that the highest quality products are made available to address today's challenges and meet the demands that tomorrow will present.

Myth: IP rights stifle human progress and the sharing of knowledge

Fact: IP rights actually promote the sharing of knowledge and human progress by *requiring* patent holders to disclose important aspects of their inventions, including key findings, methods, details, and data, that other inventors and businesses can then learn

from and draw upon. This process has helped mankind advance for generations, and so much so that America's founder wrote the protection of IP rights into the U.S. Constitution.

Countries that protect and enforce IP rights provide businesses and inventors the security needed to research, develop, commercialize, and transfer technology abroad. Nations with strong legal frameworks to protect IP have much higher rates of patent, copyright, and trademark filings than other countries, and tend to be much more innovative and creative societies. IP facilitates the opportunity for innovation to be sustained and ultimately improve the quality of products through the financial resources it generates.

Strong IP rights in developing countries vastly improved the likelihood that these nations will be recipients of advanced technologies, and able to use them in a way that spurs their own development, economic growth, and capabilities as an innovative society.

Myth: IP rights only provide advantages to the developed world

Fact: Every country possesses its share of innovators, artists and scientists who stand to personally benefit from the protection of IP. Safeguarding their intellectual property also contributes economically, culturally, and technologically to the country's development. All together, this creates an environment that embraces innovation and creativity, and encourages a culture to pursue the same.

As a recent report notes, "Strengthened IPRs are significantly and positively associated with: developing country patent applications and expenditure on R&D as a share of GDP, inward FDI, merchandise imports, service imports and the inflow of high-tech products."^v

Scholars have identified opportunities for economic growth in emerging economies that support IP rights. Keith E. Maskus finds that "stronger IPRs in major industrializing economies such as China, Brazil, and India should produce a significant growth bonus of as much as 0.5 percent per year for those countries through enhanced inflows of trade, foreign direct investment (FDI), and licensing."^{vi}

Myth: Compulsory licensing is the best way to promote tech transfer

Fact: A report prepared for and commissioned by former U.K. Prime Minister Tony Blair and The Climate Group entitled “Intellectual Property Rights: The Catalyst to Deliver Low Carbon Technologies,” concluded that IPRs, particularly patents, “will be a catalyst, not a barrier, to creating and deploying low-carbon technologies,” and that “threats to strong IPRs, such as easily-obtained compulsory licensing, are likely to be a strong disincentive to invest.”^{vii}

This same fact is true for all technologies and products. Compulsory licensing and other unwarranted exceptions to patent laws and policies stifle innovation and technology diffusion in the long run. This happens because, without a predictable legal environment that guarantees them some return on their hard work and investment, businesses and investors will simply choose not to innovate, or not to share it with particular countries.

One of the other problems with allowing compulsory licensing is the failure to consider the lack of technical expertise, know-how, infrastructure, and other items needed in-country to assemble, utilize, and maintain the technology effectively. With involuntary mechanisms such as compulsory licensing, the patent holder’s constant support and assistance will simply not be available.

Myth: Compulsory licensing is the only way to promote tech diffusion

Fact: According to the World Business Council on Sustainable Development, “Technology is transferred to developing countries through foreign direct investment (80% of capital inflow to developing countries), commercial cooperation agreements, joint ventures, licensing and local training and technology cooperation.”^{viii}

Other studies conducted by organizations such as Copenhagen Economics and Chatham House list a variety of voluntary, IP-friendly, commercially-viable ways to transfer technology: from the simple sale of the product from manufacturer to consumer, through a wide variety of licensing, production, and other time-proven methods that optimize not only technology diffusion, but spur innovation as well.

Myth: IP protection has no impact on international trade and investment

Fact: Strong IP rights are a key component to attracting the massive investment in research and development—from both the public and private sectors—necessary to develop and commercialize a broad range of technologies that improve lives, enhance

our livelihoods, and advance mankind. It is this type of investment that is critical to solving global problems ranging from access to medicines and energy security, to climate change and food scarcity.

IP rights also enhance trade and spur competition by inducing innovation and keeping the playing field to create level. IP rights provide a clear legal framework for all to work, innovate, and compete within, giving participants a sense of predictability and security that generates innovation and competition. And the more innovation and competition we have from a diverse number of countries in the global marketplace, the greater likelihood we will more rapidly reach the development of breakthrough technologies needed to address global problems, and with the greatest choice and the lowest prices possible to the consumer.

As previously noted, IP protection sparks commercial incentives for corporations to engage in foreign direct investment, joint ventures, co-production, cooperative research endeavors, and licensing arrangements with local partners. Conversely, weak IP regimes discourage these joint ventures and other collaborative efforts, which ultimately limits benefits of spillovers and creates negative consequences for their economic growth overall. Research produced by the University of Colorado illustrates the potential gains in foreign direct investment in developing countries if stronger patents were in place.^{ix}

Endnotes

ⁱ United Nations Framework Convention on Climate Change, *Enabling Environments for Technology Transfer*, 4 June 2003.

ⁱⁱ Lee, Bernice, Iliev, Illian, and Preston, Felix, “*Who owns our low carbon future? Intellectual Property and Energy Technologies*,” Chatham House, p 8. 2009. <http://www.chathamhouse.org.uk/publications/papers/view/-/id/775/>

ⁱⁱⁱ *Intellectual Property Protection and Green Growth: Analysis and Implications for International Climate Negotiations*. Garten Rothkopf, 2009. Web. 23 September 2009.
<<http://www.theglobalipcenter.com/index.php/resources/reports>>

^{iv} *Measuring the Economic Impact of IP systems*, World Intellectual Property Organization, 2007. Web. 24 September 2009. <http://www.wipo.int/portal/en/news/2007/article_0032.html>

^v Johnson, Daniel K.N. and Lybecker, Kristina M. *Innovating for an Uncertain Market: A literature review of the constraints on environmental innovation*, Colorado College Working Paper, 2009: 14.

^{vi} “Intellectual Property Rights Can Spur Developing Countries and World Growth,” *Peterson Institute for International Economics*, 16 August 2000. Web. 23 September 2009.
<<http://www.iie.com/publications/newsreleases/newsrelease.cfm?id=58>>

^{vii} Harvey, Ian. *“Intellectual Property Rights: The Catalyst to Deliver Low Carbon Technologies.”* A Breaking the Climate Deadlock Briefing Paper. (The Climate Group, 2008)

^{viii} *“IPR and technology transfer: myths and realities.”* World Business Council for Sustainable Development fact sheet, p 4.

^{ix} Maskus, Keith E. *Intellectual Property Rights and Economic Development*, University of Colorado, Boulder, 2000. <www.colorado.edu/Economics/mcguire/workingpapers/cwrurev.doc>