

# Intellectual Property Enforcement

## Creating Prosperity and Growth by Protecting IP Rights Abroad

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## The Opportunity

Intellectual Property (IP) rights are crucial in sustaining the competitiveness of innovation-based economies like the United States. Whether in the form of patents, copyrights, trademarks, or trade secrets,<sup>1</sup> intellectual property encourages innovation and attracts investment that creates new jobs and speeds up the rate of economic growth. Although not highly visible, it is an important engine of prosperity in this country. IP impacts consumers, who in the long run benefit from decreased costs in health care, agricultural products, communications, and transportation. IP is also becoming central to business models in more industries than ever before, driving the revenues of software, media, pharmaceutical, and retail enterprises to name a few.

## The Challenge

Though its role is increasingly critical in securing the economic well-being of the United States, IP enforcement often falls through the cracks in the international arena, especially in developing countries, where the market for pirated and counterfeit goods is large and where there are few obvious incentives to crack down on it. However, developed and developing nations alike suffer economically by not enforcing IP protection. The U.S. alone loses billions of dollars and thousands of jobs per year due to the lack of enforcement of IP rights abroad.<sup>2</sup> By not enforcing IP standards, developing nations lose out as well, as Foreign Direct Investment (FDI) lags in countries where enforcement is minimal. While FDI flows to countries where high returns can be generated, the type of FDI a country attracts is largely determined by its IP regime.

## The Solution

In order to strengthen our economy, the U.S. needs to rally international and domestic support for IP protection in the industries where it matters most: software, media, pharmaceuticals, and retail. The U.S. also needs to use economic incentives to persuade developing countries that it is in their best interest to protect IP.

### Software

The U.S. software industry is a major contributor to the economy, generating more than \$115 billion and employing more than 236,000 workers annually. As the rapid pace of technological innovation outperforms the utility of patents, firms are increasingly turning to trade secrets and copyright as a means to protect their intellectual property. Even though both of these options exhibit great shortcomings, new forms of protection in this area have not yet been developed, making it even more difficult to form fair and fundamental channels of technological exchange between developing and industrialized nations<sup>3</sup>.

Software is easily and cheaply copied, forcing the software industry to face significant technological and cost barriers to registration, monitoring, and enforcement of individual licenses by IP-holders. For example, more than 80 percent of commercial software in use in China and Russia (two of the world's largest 15 economies) was obtained illegally,<sup>4</sup> and globally it is estimated that 35 percent of all software installed on personal computers is pirated. At \$40 billion annually, the economic cost of piracy is significant.<sup>5</sup> Since many firms and individuals who pirate software would not be able to pay license fees if they had no other choice,<sup>6</sup> measuring the opportunity cost in terms of lost sales due to illegal activity poses great difficulties. Because the low cost of packaging and distribution makes it even more challenging to track down perpetrators, the software industry needs to focus its attention and limited resources on illegal IP distributors rather than an ever-expanding pool of end-users.

Host governments can and should play a major role in monitoring and enforcing IP rights across software distributors and end-users. However, software companies can go a long way in facilitating governments' actions in this area by: 1) distributing only through accredited vendors/distributors; 2) integrating license scans into update processes and refusing updates to unregistered users; 3) imposing direct contractually-based fines on infringing customers; and most importantly, 4) working with local governments (scale permitting) and trade/governmental groups to ensure enforcement.

The incentives for developing countries in establishing IP protection in the software industry is clear: many American and Western European software companies currently invest in India, China, and Eastern Europe to meet their low-cost IT and clerical services needs. However, many, if not most, of these companies only direct their critical software development projects to facilities and countries where they are certain that IP-enforcement regimes will allow them to protect their work and ideas – a criterion that many Indian and Chinese facilities do not meet. As a result, FDI tends to lag in host countries with lax IP protection especially since, in the long-term, higher-value development work (such as product coding) stimulates economic growth much faster than lower-value (and lower-risk) IT services work (such as the maintenance of legacy software systems). Thus, developing countries have a clear economic stake in stepping up monitoring of these industries.

For the U.S., the potential economic gains are tremendous – by reducing software theft by ten percent over four years, the U.S. could potentially create millions of jobs while bringing in billions of dollars in tax revenues.<sup>7</sup>

## Media

It is estimated that pirated media such as DVDs, video games, and music causes the U.S. to lose 373,375 jobs, \$58 billion in output, and \$2.6 billion in state, local, and federal tax revenue annually.<sup>8</sup> Since these mediums of content-sharing and exchange also embody indigenous cultural identity, inadequate copyright protection is also hampering the progress of domestic cultural enterprises. Anticipating the serious consequences of this trend, India, one of the top ten film-exporting countries in the world, is becoming a strong supporter of copyright protection, conducting anti-piracy campaigns through the Federation of Indian Film Producers.<sup>9</sup>

As media distribution moves more rapidly toward becoming almost exclusively digital in nature, content-driven industries face remarkable IP enforcement challenges, especially given their wide range of mediums and assortment of low-cost distribution channels. As is the case with IP enforcement in the software industry, these challenges exist across both real and virtual distribution channels. While the basic enforcement mechanisms are the same,<sup>10</sup> the specific enforcement techniques for each channel are quite different. Piracy of content that is physically distributed (e.g., DVDs) can be controlled by using “on-disk” and “on-deck” anti-piracy technologies,<sup>11</sup> as well as by monitoring distributors such as pirated DVD shops. However, digitally-distributed pirated content requires a separate set of anti-piracy technologies and distributor-focused enforcement techniques, including Digital Rights Management (DRM)<sup>12</sup> and other standards under development for transferable digital media (e.g., MP3s) and encryption for physically-encoded digital media (e.g., HD-DVDs). It is preferable to integrate a combination of private sector initiatives and public sector intervention for both types of distribution. In the case of physically-distributed content, governments should play an important role in cracking down on “hack shops” and other illegal distributors, while content producers should be diligent about encrypting all physical media. Digitally-distributed content standards should be used to manage

digital rights, including prompting host countries to ban P2P<sup>1</sup> sites that promote illegitimate file transfers of protected media.

## **Pharmaceuticals**

The pharmaceutical industry is a huge economic engine, directly and indirectly supporting millions of jobs and creating much of the economic growth in many regions. Patients around the world benefit directly from the medicines developed in this industry. However, pharmaceutical companies face a number of ethical responsibilities (especially vis-à-vis developing countries) that are unique to the industry. While strict IP enforcement can deny the world's poorest people access to critical life-saving therapies, looser IP interpretation and enforcement has led a number of more developed and industrialized countries to allow generic or "knock-off" therapies on the basis that it is a moral imperative to deliver these therapies at a lower cost. Taken to an extreme, these gaps in interpretation can sometimes result in tragic outcomes, as exemplified in 1999 when thirty Cambodians died after taking counterfeit anti-malarial drugs.<sup>13</sup> To address these considerations, enforcement efforts should differentiate between IP infringement in "life-saving" and "lifestyle" therapies, and governments should work with pharmaceutical companies to broaden the delivery of life-saving therapies as much as possible to those who need them.

In fully or partially integrated markets, such as the European Union, U.S.-Canada and some regions of Asia, IP enforcement is particularly difficult since more than one national actor can import drugs into the same market. The free flow of pharmaceutical products within specific trading blocs lead loosely-regulated countries to export "knock-off" therapies to strictly-regulated countries within the same bloc. As a result, differentiating between "critical" and "lifestyle" therapies is even more important when considering market integration and the delivery of therapies to the neediest countries and patients in the world.

One way to encourage pharmaceutical companies to make "critical" therapies available to poor countries at low cost would be to establish public (international, multi-country) "award" funds that subsidize these companies' research and development costs. Several charitable foundations and international programs, including the Bill & Melinda Gates Foundation and the Clinton Global Initiative, are already working toward this end. However, much more remains to be accomplished, especially given the wide range of untreated diseases threatening the world's poorest populations and the lack of existing therapies for many severe maladies in developing countries. Furthermore, the promotion of effective manufacturing facility certification and consistent pharmaceutical labeling practices can go a long way in addressing some of the serious health concerns surrounding "knock-off" drugs.

## **Retail**

It is no secret that retail sales drive much of our economy. While its products are very diverse, the benefits and means for IP enforcement in retail parallel those of software, media and pharmaceuticals. The vast international market for counterfeit consumer goods has garnered a great deal of attention, and the United States has not remained untouched by this trend by any means. A short walk down selected Manhattan streets can quickly reflect the widespread availability of counterfeit "Louis Vuitton" bags. However, recent research is highlighting some evidence that counterfeit branded (especially luxury) goods do not constitute lost sales for the brands they seek to emulate, because those who purchase the counterfeit products usually do not have the means to buy the real brands. Furthermore, in some places where counterfeit products are common (e.g., in Chinese cities), consumers of "fakes" do not profess to own the real brand, especially since those around them are acutely aware of the differences between real and copied

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<sup>1</sup> Peer to peer.

branded products. As a result, estimating the value of sales “lost” due to copyright infringement becomes more challenging.

Curbing IP infringement in retail should in theory be easier than in the software or digital content industries since retail products are tangible, which narrows down potential distribution channels and makes it easier for enforcers to trace producers and distributors. However, economic incentives for IP enforcement are significantly lower in retail because, unlike the software or pharmaceutical industries, retailers do not need to recoup significant upfront R&D expenses to remain viable businesses. Given this context, one of the most effective approaches in enforcing IP protection is to encourage local governments and trade associations to monitor manufacturers who are contracted by foreign companies. This would enable governments and associations to promote honest manufacturers to foreign contractors, thus creating a cycle where honest manufacturers repeatedly attract more foreign investment. In fact, establishing such enforcement regimes would be greatly facilitated if trade associations were actively included since this would provide a means for locals benefiting from enforcement to cover at least part of the associated expenses. Finally, copyright protection in the retail industry should especially focus on monitoring consumer products whose counterfeit could pose real health and safety issues, as illustrated by recent concerns regarding certain packaged foods and children’s toys.

## The Strategy

To be successful in supporting IP enforcement abroad, the U.S. needs to take the lead on a strategy which will a) engage key countries whose lax enforcement measures are most detrimental to the international markets; b) rally domestic support to advance IP protection abroad; and c) encourage active support of the international community, since unilateral action or interventions through multilateral organizations alone are limited in their effectiveness.

- 1) Persuade key nations that IP enforcement is in their best interest.** While IP protection is undeniably important to the U.S. economy, the challenge is persuading developing countries that it is in their best interest to enforce IP rights. The United States needs to emphasize the compelling self-interested reasons why non-complying countries should tighten IP enforcement within their borders. From the perspective of developing countries, weak intellectual property rights protection and enforcement – especially in pharmaceuticals, chemicals, and food – are generally rationalized as a means to avoid restrictions in “the supply of essential products.”<sup>14</sup> Taken to its logical conclusion, this argument could easily lead developing countries to regard technological innovation as a public rather than a private good, which would have negative consequences for the economic development efforts of those nations. Only by protecting intellectual property rights can developing countries guarantee a) better access to technology from industrialized economies; b) the expansion of more indigenous research and development; and c) more growth-inducing foreign investment.<sup>15</sup> However, the long-term benefits of strengthening IP in developing countries are accompanied by costs that include a) administrative and enforcement expenses; b) greater payments for non-domestic proprietary knowledge; c) the economic displacement of those working in pirating industries, d) the opportunity cost of additional domestic R&D; and e) potential loss in consumer surplus.<sup>16</sup> As a result of these costs, which can sometimes be quite significant, developing nations have few incentives to consider the long-term benefits of IP protection. This simple cost-benefit analysis suggests that developing countries will need short-term cost-reducing incentives to be able to implement IP policies that bring about long-term benefits for global innovation and growth. For example, given that agriculture represents 0.7% of the U.S.’s GDP versus 27% of the GDP of developing nations, the U.S. should reduce trade barriers in agriculture from developing countries in exchange for stricter IP enforcement. This would allow developing countries to shift the cost savings accrued in agriculture toward IP-enforcing strategies with little

economic impact to the U.S. However, it is important that these strategies be tailored to the specific industries in which they are applied, especially given the multi-faceted influence of IP in the modern economy.

- 2) Rally support for IP protection abroad.** To overcome resistance from the domestic agricultural industry that will inevitably follow a proposal to reduce subsidies, U.S. firms in the technology, media, and healthcare industries have to become convinced that significant benefits – in the form of better IP protection abroad – merit their involvement in pushing for a deal more aggressively.
- 3) Enlist the support of the international community.** Establishing dedicated IP enforcement funds through public-private partnerships with international organizations such as the World Trade Organization, United Nations, and World Intellectual Property Organization could go a long way in boosting IP protection, especially in countries where the development and delivery of IP would serve as an important public good (as with pharmaceuticals). Such negotiations would require the extension of the President’s “fast track” authority, which expired in June 2007. Regardless of the chosen enforcement path, efforts should be focused in regions with the greatest potential for high returns, and not be limited to countries where enforcement is either unlikely or extremely difficult.

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<sup>1</sup> Patents are applied to product and process inventions; copyrights protect creative works such as books, music, and more recently computer programs; trademarks reserve a part of the language or symbol for identification of a specific product or service; trade secrets protect a firm or individual from the unauthorized disclosure of proprietary information.

<sup>2</sup> U.S. Chamber of Commerce, “Counterfeiting and Piracy,” 2007. Online. Available:

<http://www.uschamber.com/issues/index/counterfeiting/default>. Accessed: May 2, 2008.

<sup>3</sup> Siebeck, Wolfgang E., 1990. “Strengthening Protection of Intellectual Property in Developing Countries,” World Bank Discussion Papers.

<sup>4</sup> The Canadian Alliance Against Software Theft (CAAST) and the Business Software Alliance (BSA), May 2006.

Online. Available: <http://www.caast.org/release/default.asp?aID=170&language=French>. Accessed: May 2, 2008.

<sup>5</sup> See Business Software Alliance, [www.bsa.org](http://www.bsa.org).

<sup>6</sup> This statement is based on personal visits to and interviews with the management of a number of Chinese, Indian, and other foreign companies that are currently infringing on business software copyrights, as well as interviews with individual consumers from multiple countries that currently infringe on consumer software copyrights.

<sup>7</sup> See Business Software Alliance, [www.bsa.org](http://www.bsa.org).

<sup>8</sup> Siwek, Stephen. *The True Cost of Copyright Industry Piracy to the U.S. Economy*. IPI Policy Report #189. Institute for Policy Innovation, October 3, 2007. Online. Available: [www.ipi.org](http://www.ipi.org). Accessed: December 11, 2007.

<sup>9</sup> WIPO Magazine, “Entertainment: It’s happening in India.” May 2005. Online. Available:

[http://www.wipo.int/wipo\\_magazine/en/2005/03/article\\_0010.html](http://www.wipo.int/wipo_magazine/en/2005/03/article_0010.html). Accessed: May 2, 2008.

<sup>10</sup> 1) Anti-piracy technologies, (e.g., DVD encryption for physical media or DRM for digital media), 2) regulation of distributors, both physical and digital.

<sup>11</sup> Encryption that regulates the copying of DVDs.

<sup>12</sup> Anti-piracy technology used by digital copyright owners to control access and copying rights.

<sup>13</sup> World Health Organization, “Counterfeit medicines.” Fact Sheet Number 275 (November, 2006). Online.

Available: <http://www.who.int/mediacentre/factsheets/fs275/en/>. Accessed: May 2, 2008.

<sup>14</sup> Siebeck.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.