

Intellectual Property & Development

Brazil should follow the lead from countries like Mexico and Singapore when it comes to intellectual property rights

BY JOHN MURPHY

In the global economy of the 21st century, we are increasingly finding that innovation depends on the protection of intellectual property. The World Intellectual Property Organization defines intellectual property as the creations of the mind: inventions, literary and artistic works, and the symbols, names, and designs used in commerce. If there is a road that leads from innovation to development, it surely passes through intellectual property.

In a sense, the peoples of the developing world are like farmers praying for rain. The ideas that drive development float above them like clouds. We know clouds are made of water, but water vapor never irrigated a field. Only when the clouds open, and the rains of spring fall down, can the farmer harvest his crop. And only when innovations can be crystallized and made tangible in intellectual property can economies grow and develop.

LIKE RAIN FROM HEAVEN

Around the globe, the innovative industries are at the core of our economic progress — creating high-paying jobs, enhancing our competitiveness. In the United States, economists trace 30-40 percent of all gains in productivity and growth over the course of the 20th century to economic innovation in its various forms.

Today, approximately two-thirds of the value of America's large businesses can be traced to the intangible assets that we call intellectual property. These are among the findings of a recent study entitled "Economic Effects of Intellectual Property-Intensive Manufacturing in the United States," by Robert Shapiro and Nam Pham.

According to this study, manufacturing sectors that depend on intellectual property — such as communications equipment, pharmaceuticals, and semiconductors — generated almost twice as much value-added per employee as other manufacturing sectors in recent years. Wages in these sectors are also much higher than the national average.

In U.S. manufacturing, the number of science and engineering jobs has grown in the first years of this decade much faster in the innovative industries — up nearly 86 percent in pharmaceuticals and 88 percent in computer manufacturing. As Microsoft Chairman Bill Gates testified before the U.S. Congress in March, "Innovation is the engine of job growth; if we discourage innovation here at home, economic growth will decline, resulting



BRAZIL'S LOSS: The Novartis Institute for Tropical Diseases (NITD) in Singapore. Brazil lost the opportunity to become the home of the new facility because of the absence of strong IP protections, the author points out.

in fewer jobs for American workers.”

AN ENGINE OF INNOVATION

However, protecting intellectual property is probably even more important in developing countries than it is in the developed world. Consider the perspectives of two very different industries that both depend on intellectual property. First, in Brazil, the toy industry has found that protecting intellectual property plays a key role in successful business strategies as well as the country’s economic development.

For several years, the U.S. Chamber of Commerce, the Brazil-U.S. Business Council, and Brazil’s National Association for Intellectual Property Protection have conducted an annual survey of consumers’ purchases of counterfeit goods and their attitudes toward knock-offs. The findings in the market for toys are fascinating. Executives at Mattel, one of the world’s largest toy makers, were amazed to discover that the Brazilian market for counterfeit toys was three times as large as the legal market.

The survey also revealed that in Northern and West Central Brazil, where Mattel had no distribution network at all, counterfeit toys were completely dominant. What was most interesting was to find that the prices of these counterfeit toys were higher than the prices for their legitimate originals elsewhere in Brazil.

What does this mean for Brazil’s long-term prospects for development? Some activists claim that counterfeits are good for the poor because they offer access to goods at a lower price. However, these findings demolish the idea that failing to protect intellectual property is somehow pro-development.

Where counterfeit goods dominate, everyone is a loser except the pirates. First, the legitimate firm is losing business. Second, the consumer is paying more for the counterfeit goods than he would for the legitimate product. And third, the government is earning no tax revenue.

These findings led Mattel to develop a successful three-pronged strategy that led to drastically improved operating results:

- First, work with the authorities to expand enforcement and training activities with customs to stem the tide of illegal imported competition.
- Second, introduce a popularly priced product to compete with the fakes.
- And third, expand distribution networks in areas where counterfeiters have dominated the market.

PATENTS BENEFIT INVESTORS AND SOCIETY

For a second case study, consider the ways a patent benefits not just an inventor, but society.

When an inventor obtains a patent, he is given a temporary, exclusive right to exploit his inventions and thus recoup his investment. However, inventors are not the only ones benefiting from patents. When applying for a patent, an innovator is obliged to disclose all the information needed to reproduce his or her invention.

Consequently, when a patent expires, all of the business-sensitive information on the patent application documents becomes public, thus allowing other companies to leverage past innovations in the development of new ones.

Lack of patent protection is a serious disincentive to innovators. Consider such life-saving innovations as the new vaccine against Human Papilloma Virus. HPV is a precursor to cervical cancer which in turn is the second leading cause of death among female cancer patients.

Merck's new vaccine against HPV is a stunning example of the kinds of life-saving medicines the research-based pharmaceutical industry can develop. Studies have found the vaccine to be almost 100 percent effective in preventing diseases such as cervical cancer that are usually caused by the HPV virus.

Where did this vaccine come from? To combat the relentless assault on human health by bacteria and viruses, the pharmaceutical industry incurs some of the highest research and development costs of any industry in the world. To create a new pharmaceutical product requires an investment of about \$800 million dollars.

It also takes more than a decade of research and testing to ensure the product's safety and efficacy. More than 90 percent of the industry's prospective medicines fail in clinical testing, and only a small minority of those that succeed manage to pay back even the cost of their own research. Without the temporary protection granted by patents, copiers cheaply replicate these life-saving medicines immediately after their release.

In light of these difficulties, what possible incentive do researchers and entrepreneurs have to assume the vast risks, high costs, and long time horizons of the pharmaceutical industry? In a word, it's patents. The absence of effective patent protections in some countries effectively shuts down the ability of researchers to recoup their costs and reinvest part of it in other research projects.

When a government seizes a firm's intellectual property — as Brazil did last year by issuing a compulsory license for an HIV/AIDS drug — the signal to the market is clear: intellectual property can be confiscated at will.

THE ROAD TO DEVELOPMENT

Protecting intellectual property doesn't just bring benefits to innovators. It's part of any effective strategy for developing countries to attract foreign direct investment and technology transfer. A strong intellectual property regime reassures potential investors

that their capital and their technologies will not fall prey to piracy and counterfeiting.

Consider the broad social benefits that defending intellectual property can bring to a small country, such as Singapore, with few natural resources but the ingenuity of its population. Singapore has experienced tremendous growth that is directly linked to its strong protections for intellectual property, which is considered to be among the best in Asia.

Though Singapore is a tiny country compared to India, it has managed to attract four times as much direct investment from around the globe — about \$200 billion — much of it in high-wage sectors that are reliant on intellectual property. Consider these examples:

- Lucasfilm Animation, owned by George Lucas, the creator of the Star Wars films, opened its only digital animation studio outside the United States in Singapore in 2005.
- BMW recently set up its first design studio outside Germany or the United States — in Singapore.
- Pfizer recently opened a \$600 million manufacturing facility in Singapore.

None of this would have happened if Singapore lacked a strong intellectual property regime. Contrast this with Brazil, which in 2007 lost the opportunity to become the home of a huge new facility for Novartis. Switzerland-based Novartis identified the absence of strong IP protections in Brazil as one of the chief reasons it chose to invest in Singapore.

THE MEXICAN EXAMPLE

In the Americas, Mexico offers an excellent example of how a country can obtain significant benefits by protecting intellectual property. Mexico approved new intellectual property protections in 1991 as part of a series of reforms that led to the North American Free Trade Agreement (NAFTA). Within five years, R&D investment in Mexico by the research-based pharmaceutical industry tripled.

A World Bank study found a significant shift in the views of U.S. firms, which in 1991 had been unwilling to transfer their newest technologies — even to wholly owned subsidiaries in Mexico. Within a few years, all of this had changed.

The country has attracted hundreds of millions of dollars in investment; and these investments created thousands of jobs. Today, Mexico has become one of just a few countries in the world where pharmaceutical firms first roll out their new life-saving medicines.

And contrary to the charges of some activists, Mexico has not seen prices rise for pharmaceutical products. In fact, these prices have fallen. At the same time, generics have become more widely available.

CLIMBING THE VALUE CHAIN

In the end, it's impossible for countries to attain sustainable development without climbing

the value chain.

South America has enjoyed a five-year period marked by some of its best economic times in history. Growth has been impressive, and it has been sustained by high international prices for key export commodities such as basic grains and metals.

However, the region has struggled to climb the value chain. Its mixed record on protecting intellectual property is one reason why. Producing agricultural commodities, minerals and metals, and light manufactures is a recipe for low margins. Patenting an invention or creating a brand allows companies to propel themselves up the value chain to higher margins, and thus higher wages and employment.

In some industries, copiers win a share of the market because they reap profits from others' innovations, but they are just picking up the crumbs dropped by the innovators. They are trading a high-margin business for a low-margin business dependant on others for its life blood.

THE PRICE OF PIRACY

The price of failing to protect intellectual property must also be considered. Too often, people claim that the theft of intellectual property is a victimless crime. Just as the gains from protecting intellectual property can be measured in real money and real jobs, failing to protect intellectual property has real costs as well.

Globally, the losses are approximately \$650 billion annually. In the United States, losses from the criminal theft of intangible property cost U.S. citizens 15 times as much as crimes such as theft and burglary that relate to tangible property!

In Latin America, the losses are staggering. The previously mentioned study of counterfeiting and piracy in Brazil shows that the failure to protect intellectual property undermines public finances in a devastating way.

Looking at the losses due to counterfeiting and piracy of sports footwear, apparel, and toys — only three sectors in the economy — the study found the Brazilian treasury lost out on approximately 20 billion reais in tax revenues. A similar study by the Recording Industry Association estimates that piracy of recorded music robs Brazil's treasury of another 30 billion reais in lost tax revenues.

Brazil's music industry illustrates how failure to protect intellectual property undermines development. Brazilian artists record about three-quarters of all the music sold in the country, but 40 percent of all music sold in Brazil is pirated. The losers aren't faceless multinational corporations, but Brazilian artists.

What's true in giant Brazil is also true in Latin America's smaller economies. A study the U.S. Chamber and AmCham El Salvador released last December found that the sale of counterfeit and pirated consumer goods in the San Salvador metropolitan area caused the loss of at least \$80 million in tax revenues last year.

Nor are these losses limited to large, foreign multinationals. In 2005, El Salvador-based manufacturer Gamma Laboratorios reported that counterfeit medicines caused economic losses of around \$40 million for the country's pharmaceutical industry.

A THREAT TO HEALTH AND SAFETY

To these economic losses, we must add the health and safety threat posed by counterfeiting. According to the World Health Organization, approximate 25 percent of the medicines sold in developing countries are counterfeits of dubious medical value.

Even worse, these fake medicines can be deadly. In 2006, 365 people died in Panama after taking a cold medicine that was later determined to be counterfeit. Cell phone batteries that explode, infant formula that provides little or no nutritional value, electrical extension cords that start fires, and brake pads that don't brake — these are also among the health and safety hazards posed by counterfeit goods.

Interpol reports that counterfeiting and piracy are among the preferred methods of funding for a number of terrorist groups. One example is the 1993 bombing of the World Trade Center in New York, which was financed by sales of the most mundane product — counterfeit T-shirts.

The main attraction for terrorists is simple: Trafficking in counterfeit goods brings high profits and low risks. Interpol estimates that counterfeiting and piracy can be far more profitable than drug-trafficking. Criminal gangs like it because, even if you get caught, the punishment is generally light. But these are not victimless crimes.

THE U.S. CHAMBER'S PLANS

The ability to protect knowledge-based intellectual property is essential to the development plans of countries around the world. However, the intellectual property of innovative industries is increasingly under assault around the globe. Some governments and NGOs are aggressively seeking to erode patent, trademark and copyright protections and to undermine innovation- and research-based industries.

Opponents of intellectual property are also waging a battle for public opinion. They attack the very concept of intellectual property, defining it as an outdated notion and a barrier to access to life-saving medicine and critical technologies. They insist that businesses, innovators, and engineers should give away their hard work so it can be made available free of charge to others.

A growing disregard for intellectual property may lead us down a dangerous path. If it doesn't stop, we could face a future where the incentives for research and development have been wiped out.

In response, the U.S. Chamber of Commerce is working with friends and allies in business, government, and civil society to fight back. Last year we launched the Global Intellectual Property Center. Its mission is to champion intellectual property as a vital

engine of global development, growth, and human progress.

Our goal is in part educational. We must educate the public and policymakers about the value and importance of intellectual property. Internationally, the center will join with like-minded allies to advance our cause in countries and global forums where intellectual property is under attack.

Entrepreneurs in every country pour money, time, sweat, and their whole hearts into creating the next innovative breakthrough. In return, policymakers must make sure that these innovators have the comfort of knowing that their ideas will be protected. The road to development begins with innovation, and intellectual property is the engine that will get us there.

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