

# **Intellectual Property and Innovation Policy**

## **Executive Summary**

James A. Lewis, CSIS

December 2007

Deep changes in the ways that people create ideas, goods, and wealth are reshaping the global economy. Those changes make innovation—the creation of new goods and services—the center of economic activity.

Intellectual property rights (IPR) are crucial for innovation. The extent to which countries protect IP will determine how well they perform in the new economic environment. Nevertheless, IPR is on the defensive because it is frequently assailed for creating monopoly, expanding poverty, and slowing innovation. The problem with such criticisms is that they are wrong.

Arguments against IPR share four mistakes. First, they exaggerate the costs and risks of strong IPR. Second, they assume a narrowly focused and static set of government policies. Third, they often take a one-size-fits-all approach—particularly concerning “openness”—that assumes each productive sector faces the same incentives and constraints. The threadbare notion that the digital economy is different and needs different rules is often produced as part of the critique of IP. Finally, criticism of IPR has become a ploy to gain leverage in trade negotiations rather than a serious critique.

One criticism of intellectual property protection is that it is anticompetitive. But one conclusion to draw from the literature on IP is that governments that adjust their national IPR policies and regulations can manage any potential anticompetitive problem and mitigate any anticompetitive effect. For example, a patent system that combines transparency and certainty—and makes sure new information is readily available to others to examine how a new product was made—will actually spur competition.

Another argument is that IPR imposes unjustifiable burdens, unfairly extracts value from developing countries, and pays inadequate attention to the protection of traditional knowledge. The notion that IP imposes unjust costs is open to question. A growing body of research suggests that the opposite is true and that under the right conditions (such as openness to trade) strong IPR promotes growth. The common belief that weak enforcement benefits the copying nation at the expense of the producer nation fails to consider the damage to the copying nation’s own innovation capabilities. Countries with inadequate IP protection place an invisible ceiling on their own growth by creating disincentives for both domestic innovators and foreign investors.

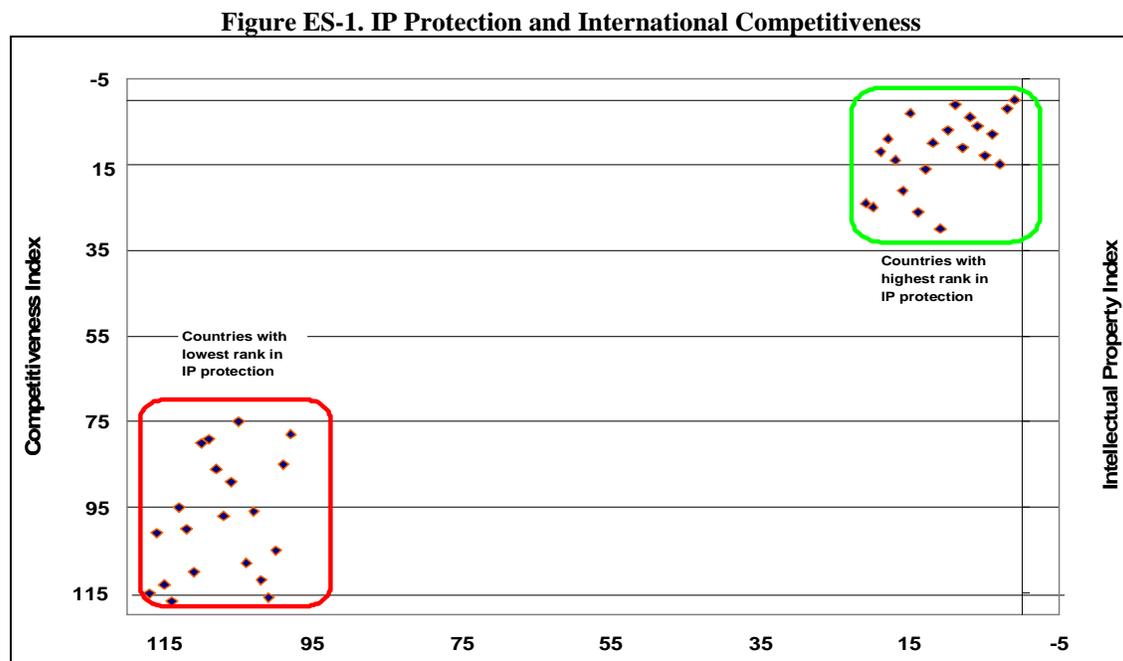
Criticism of IPR reflects Dependency theory, a 1950s explanation for wealth disparities among nations that held that the very structure of international economic relations exploited poorer countries. The theory’s chief problem is that it failed to predict or explain the rapid growth of many developing countries in the past two decades. Nonetheless, dependency theory’s rhetoric remains powerful, and the belief that the

global trade order is “structured” to exploit developing nations undergirds the conceptual map for the critique of IPR.

Weak IP protections speed some technology transfers and can be seen as just recompense for past exploitation. The problem is that this argument does not take into account the effect of weak IP protection on domestic innovation capabilities. Weak IP protection increases dependence by depressing domestic innovation, which means a greater dependence on foreign IP. In a global information economy, where the creation of new ideas and knowledge will be the most valuable economic activity, those governments that impede creation of new knowledge will be doing their citizens and others a disservice.

All these counterarguments undervalue the benefits of strong IPR for innovation. Innovation entails risk; it is a gamble. The innovator wagers that future sales will repay an investment in creating a new product. IPR reduces the risk that another individual can copy an idea, and reap the rewards without sharing the risks. Weak IPR creates uncertainty and disincentives for innovation. We know that in the absence of adequate IPR, fewer people will accept the risks involved with innovation, and that the rate and scope of innovation will slow.

Innovation is a complex process, and many factors affect it. IP is only one such factor. As many people have pointed out, strong IPR alone will not produce innovation. Nevertheless, the most innovative economies are clearly those with strong IP protection. Economies with weak IP protection are less innovative and less competitive in the global economy (see figure ES-1).



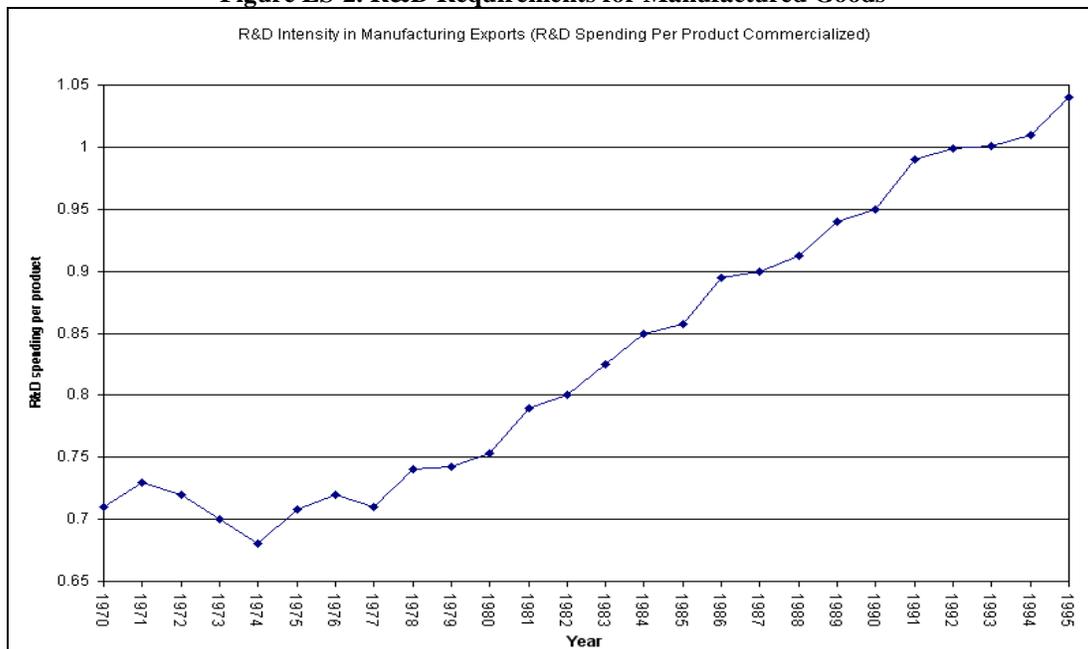
Source: Data from Michael E. Porter, Klaus Schwab, and Augusto Lopez-Claros, *The Global Competitiveness Report, 2005–2006: Policies Underpinning Rising Prosperity* (London: Palgrave Macmillan, 2005).

The explanation for this correlation between IPR and performance is also complex. IP protection is part of the infrastructure of rules and laws that make economies more productive and more innovative. IP protection reduces the risks associated with innovation: an inventor takes a gamble in creating a new product, whether it is a new soda or a new semiconductor, that requires immense research and development (R&D) investment. Without IP protection and the incentives it provides, fewer people will accept the risks or will make the investments required for innovation.

Some argue that strong IPR is no longer important as there are alternatives that will create equal or greater amounts of innovation. The problem with these alternatives is that they tend not to work. Government subsidies are inefficient compared to IPR. Greater openness may work for some intangible or digital products, but it does not work for most other products, particularly those that are tangible or that require large investments in research or in production. The development and widespread use of digital technologies have substantially changed the cost of producing and sharing anything that can be reduced to bytes. Some analysts generalize the effect of digital technologies on software or music to all industries. That generalization is inaccurate.

The rising cost of innovation means that weak IP could likely depress global economic growth by slowing innovation. The amount of R&D required for the production of manufactured goods has increased steadily over the past three decades (see figure ES-2). The increased cost means that a company or person must spend more on developing new knowledge to be able to make a new or improved product. Innovation is not cheap. Companies must spend an increasing amount on R&D to develop new products. IP protections play a part in a company's decision on whether or not to make that investment. If IP rights are weak, some investors will choose less-risky investments rather than spend on innovation.

**Figure ES-2. R&D Requirements for Manufactured Goods**



Source: Peter Sheehan and Greg Tegart, *Working for the Future: Technology and Employment in the Global Knowledge Economy* (Melbourne: Victoria University Press, 1998), 43.

Many countries have reached the inflection point for moving to stronger IP protection; some have gone well beyond it. Countries with strong industrial sectors and with adequate trade and financial facilities need effective IP protections to advance their own interests. Often, they are middle-income countries that have not met expectations for growth. Those nations would benefit most from improving IP protection. The benefits could include greater technology transfer; more foreign direct investment; and, most important, an accelerated rate of national innovation. For those countries, strong IP protection is one of the competencies required for successful participation in the global information economy.

Strong and effective IPR systems have two components: compliance with international standards and effective national enforcement. The World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is the basic international standard for IPR. National enforcement requires an active customs service and consistent court actions. Enforcement of IPR is a good measure of a country's business environment. A country with weak IPR is probably weak in other key government services as well and is a riskier place to do business for both domestic and foreign companies.

A well-constructed IP system accelerates innovation. Risks to competition exist, but these risks are wildly overstated. The key to controlling risk lies in finding the balance between protection and openness. Policymakers must address this crucial task, and economic integration and technological change can make this a dynamic problem—one in which a solution that was adequate in the past may not work for the future.

Dislike for markets and globalization or nostalgia for tired ideologies should not drive policy. Weak IP protections damage growth. More important, the damage from weak IP to developing nations' ability to innovate and grow outweighs any temporary benefit. IP protection is not sufficient in itself for innovation and growth, but if innovation, growth, and an end to poverty are our goals, then strong IP protections are crucial.

Can we draw a single conclusion from global experience and from the extensive debate over IPR? It is that countries with strong IPR are better economic performers. The performance benefits that they get from strong IPR will increase only as the focus of economic activity centers on the creation of new knowledge. Countries with weak IPR have not performed as well as others and will perform even less well in the future knowledge economy if they do not improve their IP rules and the enforcement of rights.