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COMMENT: INTELLECTUAL PROPERTY RIGHTS AND ECONOMIC DEVELOPMENT, BY KEITH MASKUS

Robert E. Evenson*

It is clear that over the past century every developed market economy in the world has built functioning intellectual property rights systems (IPRS). It is also the case that every developed market economy in recent decades has implemented either legal or administrative changes (and in most cases both) that constitute strengthened IPRS. All developed market economies are also on record as supporting stronger international IPR regimes, as reflected in the TRIPS provisions of the WTO agreement.

Against this background, it is somewhat puzzling that developing countries express political resistance and often hostility to strengthened IPRS. Many developing countries are reluctant to strengthen IPRS even while recognizing that property rights in land and structures are essential to efficient market production. Except for IPRS, developing countries generally see the legal institutions that characterize developed market economies (e.g., contract law, labor law, bankruptcy law) as essential to growth and efficiency.

In Intellectual Property Rights and Economic Development, Keith Maskus discusses the effects of IPRS on growth, noting that both positive and negative effects may be realized. His paper is in the tradition of economic analyses of IPRS, beginning with the review of the U.S. Patent System by Machlup. There is a curious disjuncture between the analyses of IPRS by economists who generally do not offer strong endorsements of strengthened IPRS and the obvious fact that strengthened IPRS have broad political support in developed countries.

Maskus offers a useful taxonomy of IPRS and reviews studies of determinants of IPRS in different countries. His review confirms the observation that developing countries are diverse in their IPRS and in innovative activity. The least developed countries do virtually nothing in domestic innovation and generally do not have functioning IPRS. As countries mature they begin to invest in public sector agricultural research, but since most plant and animal invention has not been given IPR protection until recently, these countries do not use IPRS to provide

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2 See id. at 502.

3 See id. at 489-94.
incentives for innovative activity. These developing countries do recognize that foreign direct investment can be a conduit for technology acquisition, but IPRS are typically not seen as essential to contracts between foreign firms and domestic firms and governments.

It is in the advanced developing countries that we see strong IPRS emerge. These economies are forming domestic research and development (R&D) capabilities in industrial sectors as well as stronger public sector agricultural research systems. These R&D capabilities are chiefly of the adaptive innovation type, but they also endow many entrepreneurs in developing countries with imitation or copying skills. Thus, these countries are capable of IPR "piracy" and are often accused of such. Until the "Section 301" actions by the United States and the subsequent TRIPS negotiation, this piracy typically went unpunished. The incentives for piracy by developing countries are evident from international patent data that show that very few developing countries' inventions are patented abroad. That is, given the adaptive nature of these inventions, they have small markets upstream in developed countries and missing markets downstream in less developed countries. With few seller interests to protect, developing countries focus almost exclusively on buyer/imitator interests.

This "buyer" emphasis on IPRS has probably impeded the willingness of developing countries to design IPRS that are better suited to their domestic interests. IPRS should, if properly designed, enable economies to tap the innovative capabilities of a broad range of entrepreneurs. A fixity on the role of IPRS vis-à-vis foreign suppliers does not lead to ideal IPRS. Maskus devotes a section of his paper to benefiting from IPRS and addresses some of the ways in which developing countries can pursue modifications in IPRS and complementary investments to better achieve IPR objectives.4

However, the major effect of recent developments, notably the TRIPS agreement and other provisions of the WTO agreement, is the implied use of a strong "piracy penalty." Maskus refers to the studies of the late Edwin Mansfield on the effect of IPRS on the willingness of international firms to engage in foreign direct investment (FDI) in developing countries and to expose their latest technological developments in their markets.5 These studies indicate that the piracy penalty is significant. It also appears to be the case that the technology conduit dimensions of FDI are recognized as becoming increasingly important.

Developing countries are thus confronted with what is apparently a significant piracy penalty at the same time that the FDI technology conduit role is becoming more important. They are also confronted with the need to implement TRIPS provisions under the WTO agreements. These

4 See id. at 495.
5 See id. at 484.
developments, along with the likelihood that there are unexploited benefits from domestic design opportunities for IPRS, would appear to call for a major change in developing countries' IPRS policy. This would mean a shift from grudging resistance toward internationally designed IPRS to a policy of aggressive implementation of domestically designed IPRS (subject to accepted international rules). It would be a shift from "fear of exploitation by foreigners" to a policy of "exploiting foreigners." This change has occurred in a few developing (or former developing) countries, notably South Korea; however, most developing countries have not yet made the change.

Maskus' review of the evidence generally supports the policy shift, but he does not quite endorse it. It is relevant to note that the experience of recent decades does not include the piracy penalty period. Thus, empirical relationships between total factor productivity (TFP) and R&D, or IPRS and R&D may well have changed recently. The review, however, is illuminating in that it shows that IPR effects on growth rates are not independent of other policies, notably international trade policy.

Maskus' report results from a "general equilibrium trade model" that is of interest and certainly suggests a direction for further research. He does not discuss the recent spate of endogenous growth models in the context of IPRS, although presumably the general equilibrium model is influenced by these models. This is probably because these models offer little insight into the mechanics of technology spillover or the role of IPRS in these mechanics. Some models presume that technology applied in one economic setting and found to be valuable (i.e. cost minimizing) is equally valuable in another setting ("anyone can read a blueprint"). Studies of agricultural technology clearly show that climate and soil differences between economic settings will impede the spillover of technology and that biological technology has to be separately "tailored" to different settings to be of value. Much of the industrial technology is similarly impeded because it is linked to biological technology (agricultural machinery) or interacts with economic or institutional factors.

The inherent degree of technology specificity between economic settings or locations has implications for the economic effects of IPRS. Ironically, it is in the agricultural invention fields that resistance to IPRS is the strongest (e.g., India). This is so even though very few of these inventions have value in another country. By contrast, a particular industrial chemical may have value in most economies.

The literature on "returns to R&D," both private and social (based on externalities), is primarily based on studies in developed countries. Recent studies of R&D "spillovers" reinforce the implication that social returns exceed private returns because of externalities in the form of spillovers. It appears that private returns to R&D have a higher variance,

6 Id. at 482.
but are of the same magnitude as private returns to investment in plant and equipment. Social returns appear to be much higher.

While few studies of returns to R&D in developing countries have been made, there appears to be good reason to expect an even larger divergence between social and private returns in developing countries, because of international spillovers. Studies of R&D conducted in public sector agricultural experiment statistics measure high social rates of return and attribute much of this return to spill-in facilitation.

Policymakers in developing countries are being pressured both domestically and internationally to build stronger IPRS. By no means have they completed their response to the pressures built up in recent years. Economists have traditionally been divided on the economic consequences of IPRS, even though developed countries’ governments and courts have decidedly favored strong IPRS. Maskus’ paper evaluates many economic arguments and reviews complex empirical evidence. It supports a policy direction toward developing stronger and more domestically focused IPRS. Policymakers will find it well worth reading.