franchise restaurant chains are ubiquitous in the United States, and both American and indigenous franchises are moving into markets around the world. In the U.S., 47 percent of all sales of food and drink away from home are purchased from franchise chains. Franchise chains, restaurants as well as other businesses, unite two entrepreneurs—the franchisor and the franchisee. In such arrangements, the franchisor, the developer of a trademark and a production technology, grants to local franchise-entrepreneurs the right to use the trademark and the technology in a particular location. One of the issues involved in franchise agreements is whether or not franchisees are required to buy certain inputs directly, and only, from the franchise company, a practice called tying. Franchisors have defended the practice as necessary for efficiency, while franchisees and their advisors have challenged the practice as abusive. Antitrust law treats tying as illegal if the franchisor has sufficient market power to force the purchase of the tied product; but when the franchisor’s market power is not that strong, the law judges cases under the so-called rule of reason.

Tying can be beneficial to franchisees and to consumers when it is used to monitor quality of the final product delivered. Franchise chains attempt to deliver a standardized product represented by the shared trademark and achieved through an identical production technology everywhere the trademark appears. If the franchisees are all free to purchase their inputs from a source of their own choice, franchisee A could purchase one quality of ground beef or paper product or condiment while franchisee B buys the cheapest products available regardless of quality. Franchisee B could threaten the livelihood of the franchise itself and all the other franchisees by giving them the reputation for poor quality. To prevent this, the franchisor requires certain distinctive and crucial inputs be purchased from it. The law also recognizes final product quality as a defense against the charge of an antitrust violation. In that case, courts must balance the benefits of maintaining quality against the anticompetitive effect of the product tying.

Academic research on tying in franchise agreements has been primarily theoretical, but Steve Michael, an associate professor of business administration, has examined tying in a sample of 100 franchising companies in the restaurant business. By looking at the Uniform Offering Circulars (which must follow a Federal Trade Commission format) of the franchise restaurant chains, he studied the extent of tying in the businesses and, using statistical models, looked at franchisor motivations and the effects of tying on profits. The most important variable he looked at was the
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Only 30 percent of the 100 food franchisors required the tying of any product. “percentage of wholesale purchases required that the franchisee purchase from the franchisor.”

Only 30 percent of Michael’s 100 food franchisors required the tying of any product. He found the products tied were plausible and could enhance efficiency. For example, the International House of Pancakes requires franchisees to purchase pancake batter from the franchisor. This business strategy of standardization, as measured by the special equipment required and by the company’s emphasis on national advertising, explained the variation in the use of tying from one franchise contract to another. The market power of the franchise, as measured by the market share of each chain in its segment of the restaurant industry, had no effect on whether a chain used tying. With regard to profitability, Michael found that tying did not affect the profits of the franchisor. From the study, it seems that, at least in the case of food franchises, franchisors do not use their considerable market power, as much as 50 percent in some sectors, to force franchisees to buy products. Efficiency, and not rapaciousness, is the likely motive in most cases.

According to Michael, “Although individual abuses may occur, the hostility and suspicion regarding tying that characterize the popular press . . . appear not to be justified on average.” The beneficial effects of tying for prospective franchisees, a reduction of the tendency of some franchisees to skimp on quality and, thus, damage the reputation of the franchise, deserve at least equal consideration when evaluating the appropriateness of tying in a potential franchise agreement. The prospective franchisee should ask both the franchisor and fellow franchisees the reason that a specific product is tied and judge the requirement in the context of all possible reasons for the franchisor to require the purchase.

Franchisors can also benefit from Michael’s research. At present, counselors to franchisors advise extreme caution in using tying, but economic research and business practice has shown that ties can have beneficial effects. Therefore, franchisors should consider employing and explaining tying when doing so can enhance efficiency. Existing franchising agreements tend to simply list products that must be purchased from the franchisor without explanation, but it would be better for franchisors to be aggressive in stating the gains in efficiency to be realized from the required tying of products. This might well reduce some of the hostility against tying among both current and prospective franchisees as well as provide useful background for an antitrust defense should one be necessary.

With regard to public policy, Michael suggests that, in the light of his research, including the fact that most of the revenues that franchisors gain from franchisees comes from royalties, rather than from selling tied products, it would be best if courts viewed tying in franchise restaurants through the lens of the rule of reason. He further suggests that contract law, not antitrust charges, should be sufficient to punish almost any abuse by franchisors.

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Business Administration Professor Anju Seth, along with former Dean of the College of Commerce and Business Administration Howard Thomas, and former Ph.D. candidate Kannan Ramanathan, undertook a study to judge the value of new knowledge-based intangible assets. Their study focused on the creation and protection of intellectual property in the global pharmaceutical industry. They examined whether a pharmaceutical firm creates economic value (1) by obtaining a patent for a chemical compound and (2) by obtaining Federal Drug Administration (FDA) approval for a drug it has developed. They also studied whether the value created for U.S. firms differs from that created for non-U.S. firms.

It is extremely costly to develop a pharmaceutical invention such as a chemical compound, but it may be neither difficult nor expensive for a competitor to imitate it. Therefore, patents are needed to provide protection to the pharmaceutical firm’s investment in innovation. A patent grants the right of exclusive use of the new compound to the innovating firm, as well as the right to combine, modify, and transfer the invention.

Although applying for and receiving a patent offers the firm some protection against others producing the same chemical compound, there is still considerable uncertainty about the eventual economic value of the patent and the underlying piece of intellectual property (that is, the formula for the new compound). First, merely receiving a patent may not be sufficient to prevent imitation. The patent must also be enforceable, but defending a patent against imitators can entail lengthy and expensive litigation. Second, commercial applications arising from the patented compound must be developed. In order for pharmaceutical companies to realize the potential from a patent, the patent holder needs to develop a drug that embodies the patented innovation or to license or sell the rights to do so. Then, the FDA decides on the safety and effectiveness of the drug. Once the drug has been approved, it can be marketed in the U.S.

Clearly, for a drug to reach the commercial stage is not easy. A patented resource might never be transformed into a viable commercial product. At the same time, the commercial product would not exist in the absence of the intellectual property represented by the new chemical compound. To understand how intellectual property contributes to firm value, it is useful to examine whether firm value is enhanced at the time of obtaining a patent or at the time of the successful development of commercial applications or whether both stages are associated with value creation.

Seth, Thomas, and Ramanathan looked at the changes in stock prices for a sample of pharmaceutical firms over a set period of time from 1974–1995 (excluding the nine-month period in 1988 during which there was a major slump of nearly all stock prices). They concentrated on tracking and comparing changes in stock prices from before a patent or FDA drug approval was announced with prices after the event. They analyzed the stock market returns for several days before and after the announcement dates for patents and FDA approval.

They found, on average, a significant increase in the value of the firms in their sample at the time drug approval is obtained. This suggests that when a firm develops a new drug based on the knowledge for which it has obtained a patent, there seems to be much less uncertainty about the value to the firm of that knowledge. Therefore, the economic value of the firm increases to reflect the new information about the productive value of the firm’s intangible assets. However, firm value, on average, does not increase significantly at the time of obtaining a patent, reflecting the uncertainty of the commercial success of the subsequent drug development process.

Overall, the results highlight that in the pharmaceutical industry the economic value of the firm’s knowledge-based intangible

On average, researchers found a significant increase in the value of the firms in their sample at the time drug approval is obtained.
assets is closely associated with the new products that the firm introduces. At the same time, the results suggest that patents are important to prevent the dissipation of this value.

Seth, Thomas, and Ramanathan, find no systematic differences between domestic and foreign firms in the patterns of value creation at the time of obtaining a patent or obtaining FDA drug approval. Foreign firms do not appear to enjoy a substantial advantage over domestic firms in these contexts, but neither are they at a disadvantage.

This article is based on a chapter entitled “The Value of New Knowledge-Based Intangible Assets: An Examination in the Global Pharmaceutical Industry,” published in the volume Valuation of Intangible Assets in Global Operations, edited by F. J. Contractor. Anju Seth is a professor of strategic management in the Department of Business Administration, College of Commerce and Business Administration at the University of Illinois at Urbana-Champaign. Howard Thomas is now Dean at Warwick Business School, University of Warwick, U.K., and Kannan Ramanathan is currently Senior Decision Scientist at the Information & Decision Technology Laboratory, GE Global Research Center. For further information on this research, contact Anju Seth at a-seth@uiuc.edu.
Until quite recently the whole concept of intellectual property was far from the forefront of public consciousness. We might check the copyright date on a book to see when it was written or might learn that Thomas Edison was the holder of an amazing number of patents, but intellectual property did not seem a crucial issue in our national or international day-to-day existence. More recently, the concept of intellectual property has been thrust into our collective consciousness by a couple of issues covered fairly heavily by the media. The first is the various flaps caused by the advent of MP3 software and Web sites like Napster that facilitated the exchange of music electronically, circumventing the copyrights of musical artists and the industry as a whole. Questions of intellectual property rights have also been in the news in the context of the Third World. The people of the developing world and some of their leaders have opposed in one way or another the control exerted by companies in industrialized nations over patents for such items as plant varieties and drugs.

UI economics professor Earl Grinols and co-author Hwan Lin of the University of North Carolina at Charlotte have conducted a study of intellectual property rights protection in an international context and have drawn some conclusions that contradict those of many previous studies. Intellectual property rights represent a delicate balance between competing forces. Social interest dictates that new products should be available at as low a price as possible. However, allowing all producers to have immediate access to new products and technology reduces the ability of the innovators to gain the rewards of the innovation and, thus, reduces their incentives for future innovations. Grinols and Lin explored the case in which innovation occurs in one area, from which most innovation comes at present and which protects the innovations more strictly than another region, in which many fewer innovations occur and where the protection of intellectual property rights is less stringent. They call the innovating region the North and the other region the South.

The proper enforcement of intellectual property rights, they say, “depends on the effect that protection has on the market-driven and inherently dynamic processes of innovation and growth.” They feel that analysis of this process must be carried out in a dynamic context. Most previous analyses have come to the conclusion that the South is disadvantaged by strong intellectual property protection because the South, which does not innovate as much, must pay higher prices for imported goods still under patent when Southern firms could produce the products at costs much lower than those of imported goods. The same assumptions lead to the idea that less patent protection for Northern products in the South is a detriment to the North. When the two researchers developed their own model, they found that the North can sometimes be better off if there is less, or even no, protection of intellectual property in the South.

Many of the commonly held opinions about the relative benefits to North and South come from the views of innovating companies who have experiences similar to those of pharmaceutical companies. It is not uncommon for pharmaceutical companies to develop drugs that are specific to diseases in a certain part of the world. The importance of some of these drugs is greater in tropical regions than in the North. Many other products as well, such as automobiles and plant varieties, among others, are often designed or modified to the region of their destination. A Southern market that does not credibly enforce intellectual property rights may find Northern resources redirected to innovation in products that are marketed in other regions.

The South benefits from price reductions for goods formerly produced under patent and purchased from the North but experiences an eventual loss due to a slower-growing range of goods from which to choose. Of course, there are also consequences for the North. Lax enforcement of intellectual property protection in Southern countries can affect Northern international trade, innovation, or both. After the change to lower protection in the South, the North’s profits from sales to the South drop, and the sector devoted to producing...
products for the South shrinks. The immediate impact is to free up resources for the production of Northern consumables. It also frees resources to devote to the innovation of goods for the Northern market. Paradoxically, the North may sometimes actually gain by the failure of the South to promote strong protection of intellectual property. It is possible for the South to harm itself by unilateral lax enforcement of intellectual property protection or, conversely, help itself by voluntarily adopting as high or higher standards of protection as the rest of the world.

Clearly, both the North and South have a common interest in selecting intellectual property protection that is not too strict: both lose when too strong, long-term monopoly situations are created. The issue is whether there is common interest in enforcing common intellectual property rights that are not too low. A positive answer is significant because self-interest is a powerful motivator in working toward international cooperation.

According to Grinols and Lin, the losses to the South from a smaller range of future goods can outweigh the terms-of-trade and price advantages from producing copied Northern goods at lower cost. For the South, optimal intellectual property protection could be either higher or lower than that enforced in the North, depending on the South’s need for Northern innovation and how strongly Northern industries shift resources away from non-protected markets. The two researchers were surprised by the finding that lower standards of intellectual property protection in the South could benefit the North. They expected that the combination of worse terms of trade for the North and a smaller market for innovated products would guarantee lower innovation rates and loss of income. Not only did they find that Northern innovation could be higher or lower after the switch to lower protection in the South, but that Northern welfare, paradoxically, might rise due to the beneficial effects of the freeing of resources previously devoted to innovating Southern goods and the subsequent increased innovation in Northern products. From the North’s point of view, the transfer of resources from innovation in one sector to innovation in another or to production of current consumer goods is a major consideration in the proper evaluation of property rights protection. Rather than accepting an unexamined standard that the South should always push for less property rights protection and the North for more, Grinols and Lin suggest that the issue should be re-examined by both parties and the search be directed to finding common ground for agreement.

Earl Grinols, a professor of economics at UIUC, is a former Senior Economist for the Council of Economic Advisers to the Reagan White House. Hwan C. Lin, who received his Ph.D. from the University of Illinois, teaches economics at the University of North Carolina, Charlotte. For further information on this research, please contact Earl Grinols at grinols@cba.uiuc.edu.
This feature highlights the recent research achievements of the faculty of the UIUC College of Commerce and Business Administration. To find out more about any of the projects mentioned, contact the editor, Janet Fitch, who can put you in touch with the appropriate faculty member.

Grants

Elizabeth Powers, Economics and the Institute of Government and Public Affairs, has received $25,000 in funding from the University’s Disability Research Institute for the project, “Determinants of the Adult Achievements of Child SSI Beneficiaries: Evidence from Linked Public-Use Data and Social Security Administration Records.”

Honors

Joseph Cheng, Professor of Business Administration and Director of the Illinois Center for International Business Education and Research, will assume the Chair of the International Management Division of the Academy of Management.

Emerita Professor of Economics Marianne A. Ferber has been named the co-recipient of the 2001 Carolyn Shaw Bell Award for furthering the status of women in the economics profession. Her co-recipient Francine D. Blau, Frances Perkins Professor of Industrial Relations, Cornell University, is a former member of the UI economics faculty.

Don N. Kleinmuntz, Professor of Business Administration, is editor of a new journal, Decision Analysis, see http://da.pubs.informs.org for further information.

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