Editor’s Introduction

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I. Background

Innovation is the main driving factor in economic growth. Innovation includes the generation, diffusion, absorption and application of new ideas, knowledge and technologies, which leads to new or better goods and services, production processes, marketing methods (distribution, etc) and better forms of business organisation. Innovation is a major source of economic growth for both developed and developing countries.

Asia has experienced rapid economic growth and development since the end of the Second World War. To begin with, many Asian countries industrialised by developing import-substituting industries such as food processing, textiles, footwear, etc that built on their agricultural strengths. South Korea and India also focused on developing medium and heavy industries. Japan concentrated on rebuilding its industries through exports and by opening, to a degree, its economy to trade and investment. The Japanese approach was followed by China, South Korea, Singapore, Taiwan and Hong Kong. Later, Indonesia, Malaysia, Thailand and the Philippines introduced similar export-oriented policies that led to their rapid growth from the 1980s.

Technology was important, to varying degrees, in Asia’s export success. Growth was fueled mainly by technology derived from imported capital equipment. As Brahmbhatt and Wu in a World Bank Report pointed out:

While the econometric evidence is mixed, a rich body of case study literature argues that East Asian firms may have derived significant technological benefits from exports under longer term Original Equipment Manufacturing (OEM) contracts, as part of the global production networks of foreign multinationals … Here evidence for technology transfers through ‘vertical’ relationships between local firms and MNC affiliates (another form of supplier–oriented upgrading) is more convincing than for other channels that have been suggested.¹

Almost 80 per cent of the world’s research and development (R&D) is carried out in the developed world. For most countries, innovation means catching up with developed countries. However, even developed countries rely on imported technology for growth. Eaton and Kortum have estimated that foreign sources of technology account for at least 80 per

cent of domestic productivity growth in most Organisation for Economic Co-operation and Development (OECD) countries—except for the United States and Japan.2

However, the ability to introduce technology from abroad depends on a country’s ability to learn and absorb the technology, which depends on scientific and technical skills within the country in universities, public and private research bodies, and the willingness of multinational companies to invest in training local staff.

Weak intellectual property rights (IPRs) reduce the returns from domestic R&D. However, for countries at an early stage of economic development, with little local R&D, there is little to protect. Copying allows local industries to grow—at least in markets where easy copying is possible. As a country develops and starts to develop its own indigenous research, IPR protection becomes more important. For example, new products increasingly come from innovation in large, fast-growing developing countries such as China, India and Brazil. Initially these new products were developed for domestic consumers but now increasingly they are for export to developed countries.3 Industries engaged in indigenous research will argue for better local intellectual property (IP) protection and will clash with domestic industries that thrive on copying.

IPRs provide an economic incentive to innovate but they differ in their importance across industries. Mansfield5 concluded in 1985 that patents were only essential in chemical industries and pharmaceuticals, but more recent work by Maskus6 finds that patents are also important in newer technologies such as biotechnology and plant genetics.

IPRs do not exist in a policy vacuum. For example, the importance of IPRs in promoting innovation is affected by a country’s complementary endowments and policies. Government commitment to education and skills training is more likely to lead to greater innovation—and so IPR protection becomes more important when combined with a policy emphasis on education. Similarly, the relationship between competition law and IPRs does not exist in a vacuum. Countries that are closed to trade, and so face little import competition, will find IPRs create greater market power than they would in an open economy. Thus, competition regulators may need to play a greater role.

IPRs promote innovation by allowing firms to protect their ideas or expression—so leading to new products or new forms of expression for which consumers are willing to pay. IPRs do not necessarily confer market power but they might. Where IPRs designed to promote innovation create substantial market power, they may conflict with competition law that tries to ensure new ideas and expression are disseminated at least cost as widely as possible. Put more technically, there may be a clash between IPRs, designed

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3 See ’Innovation—the New Two-way Play’ Knowledge@Wharton. Available at http://knowledge.wharton.upenn.edu/article.cfm?articleid=2684.
to encourage optimal innovation over time (dynamic efficiency) and competition law, designed primarily to promote efficient short-term resource allocation (static or allocative efficiency where goods and services are supplied at least cost to consumers prepared to pay for them). Countries may face difficult policy choices in trading off conflicts between these two kinds of efficiency (i.e., optimal innovation over time versus the cost-justified use of innovation).

Many believe dynamic competition to be more important than short-term price competition. For example, McKenzie and Lee argue that economic models of price competition (i.e., static models) ‘exaggerate the economic harm done by real-world monopolies in real-world markets’ and that ‘some degree of monopoly is good because without some monopoly presence no economy can ever hope to maximize human welfare over time’.7

Yet, modern competition law enforcement around the world (following the United States) continues to be concerned, mainly, with short-term economic efficiency and to apply economic models of short-term price competition. So, for example, in defining markets for competition law purposes, the focus is on price competition by using a price elevation test that looks at the extent to which consumers switch product as a result of an increase in price. However, competition in new product or process markets is often on the basis of product characteristics, not price. So markets defined for competition law purposes solely on the basis of price competition may not reflect competitive realities in either developed or developing countries.

II. Intersection between IPRs and Competition Law

Over the last 20 years, the United States has been at the forefront of the development of the policy and jurisprudence of the intersection between competition law and IP law. Typically, the United States has focused on the trade-off between domestic innovation (in the United States) and domestic dissemination of ideas and expression (again in the United States). The policy debate has been concerned with whether the traditional approach to competition law enforcement, with its focus on price competition, should be changed to accommodate situations where innovation and IPRs are important.

US regulators started to seriously consider the importance of dynamic competition from the early 1990s. For example, in their joint 1995 ‘Antitrust Guidelines for the Licensing of Intellectual Property’, the Department of Justice and the Federal Trade Commission (FTC) stressed that: the common purpose of intellectual and competition laws; intellectual property was like any other type of property; IPRs did not necessarily create market power; and that licensing is generally pro-competitive.8 The 1995 Guidelines also said that while licensing was pro-competitive, a licensor could limit a licensee’s use of its technology in the same way that the licensor could if it exploited the IPR itself. So there is no obligation to promote competition in licensing one’s own IPR.

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The 1995 Guidelines also identified three kinds of markets relevant to dynamic competition. First, an innovation market that involves R&D aimed at improving products or processes. Second, a technology market where the IPRs themselves are bought and sold (eg IPR licenses and the competing technologies that constrain any market power the licensor/licensee may have). Finally, the goods market which consists of the goods and services comprising the IPRs.9 This characterisation has been questioned. For example, Hay and others wonder whether innovation markets are new or simply a new name for potential competition from new technologies.10

Most in the United States now agree that competition laws should incorporate dynamic competition into the existing approach. For example, in 2007, the US Antitrust Modernization Committee concluded that ‘[c]urrent antitrust analysis has a sufficient grounding in economics and is sufficiently flexible to reach appropriate conclusions in matters involving industries in which innovation, intellectual property, and technological change are central features’.11

The US approach to the intersection of IP and competition laws has been largely followed in Europe, Australia, etc. Competition law guidelines dealing with the intersection have largely followed the United States. However, is this approach appropriate to other countries, with different business practices, legal systems and levels of innovation, IPR regimes and stages of development? This book provides an overview of the relationship between IPRs, competition law and policies in Asian countries. The goal was to consider their intersection within a broader economic and legal context than just a domestic trade-off between innovation and static efficiency as in the United States. For example, for countries with little or no innovation there is no trade-off.

III. Competition, Innovation and Welfare

In the short-term, competition improves consumer welfare and contributes to economic growth by forcing firms to work in consumer’s interests. Firms that fail to serve customers with the products they want at the lowest price lose out to firms that do. Competition drives price down towards cost promoting efficient resource allocation. However, to be competitive firms must be internally efficient. So competition also forces internal efficiency. As Holmes and Schmitz pointed out in a recent survey of competition and productivity:

We have reviewed a new literature that has examined industries experiencing dramatic changes in their competitive environment. Nearly all the studies found that increases in competition led to increases in industry productivity. Plants that survived these increases in competition were typically found to have large productivity gains, and these gains often accounted for the majority of overall industry gains.12

While competition seems to improve what economists call X-efficiency or internal or within-plant efficiency, some argue that too much competition might also reduce dynamic efficiency and so longer-term economic growth. Schumpeter argued that economic change depends on innovation, entrepreneurship, but also on market power. Market power is beneficial, he said, if it is derived from innovation and provides better outcomes for consumers than price competition. While innovation may create monopoly power, rivals and imitators soon compete away these monopoly profits. Temporary monopolies, he argued, were necessary to provide the important incentives necessary for firms to develop new products and processes. Competition that reduces a firm’s ability to capture monopoly profits discourages innovation and so long-term growth.

Evidence on the relationship between competition and innovation is mixed. For example, Blundell, Griffith and Van Reenen found a strong positive relationship between product market competition (eg the number of competitors) and productivity growth and innovation. Others, like Michael Porter, argue that product market competition promotes growth because firms are forced to innovate or go out of business. Factors that limit competition such as barriers to entry are also important—if there are barriers to firms introducing new technology then there is a reduced incentive to innovate.

Firms innovate because they believe they can make profits from R&D. This depends on the economic environment and the market conditions in which a firm operates. A firm is more likely to invest in R&D if it believes it can develop a major innovation that limits post-innovation competition (by making competitors’ products obsolete or too costly). If an innovation is relatively trivial (and so only slightly differentiates the product from others) then it is likely that monopoly profits will be negligible. So, the likely level of post-innovation competition will be an important factor in deciding whether to engage in R&D.

However, innovation might be driven, also, by an attempt to pre-empt the R&D of a competitor or possible new entrant. R&D decisions also need to take into account the impact of any innovation on any existing monopoly profits (ie where innovation ‘replaces’ existing products). To the extent that new innovation cannibalises existing profits, the incentive to innovate will be diminished. So, the dynamics of competition are more complicated than Schumpeter believed.

In 2007, Richard Gilbert surveyed the theoretical and empirical literature on competition and innovation and stressed that there are many factors that affect the relationship between incentives to innovate and market power. These factors include:

- Property rights system. How much protection is there? Are IPRs easy to invent around? Can innovation be protected outside the IP system?
- Nature of the invention—does it involve a new product or process innovation that reduces production costs? Is it a minor advance or does it replace existing products?

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16 See also chapter four in this book by Sidak and Teece.
— Extent of competition pre and post-innovation—is a highly competitive situation before the innovation likely to be replaced by less competition afterwards, etc? Is competition mainly on the basis of price or product? Are there significant barriers to R&D? Is the inventor also the innovator, or does the inventor expect to license the innovation to someone else?

— The dynamics of R&D competition. Are outcomes of R&D predictable? Can firms collaborate to avoid duplication of R&D?

Gilbert went on to conclude that:

The large body of economic theory and empirical studies on the relationship between competition and innovation fails to provide general support for the Schumpeterian hypothesis that monopoly promotes either investment in R&D or the output of innovation. The theoretical and empirical evidence also does not support a strong conclusion that competition is uniformly a stimulus to innovation.18

Studies by Blundell, Griffith and Van Reenen,19 Greenhalgh and Rogers20 provide some evidence that oligopoly may provide better innovation outcomes than more competition. Aghion and Griffith have empirical evidence supporting their argument that there is an inverted U-shaped relationship between competition and innovation.21 That is, patents rise as competition increases but then a point is reached at which increased competition leads to a falling off in patent rates.

The complex factors that affect the relationship between competition and innovation are likely to differ not only across markets in a single country but more so across countries. Countries need a range of capabilities to allow firms to successfully exploit innovation. Teece first stressed the importance of complementary assets.22 Assets such as skilled labour, information, financing opportunities, ability to use IPRs, the availability of sophisticated legal and accounting services are all important—and particularly important for an innovative firm in a developing country whose innovation is to be exploited in a developed country.

Given the uncertainties in the relationship between competition and the incentives for innovation, it seems likely that the relationship between competition law and IP will differ between countries.

Not only will the impact of one law on the other be different due to local economic circumstances, but countries may have different policy objectives towards both laws. National interests become important to any trade-off. For example, a country might use compulsory licensing to force overseas technology transfer to a local monopoly and then either regulate the price or protect it against imports as part of an industrial policy aimed at developing local industry or local vested interests rather than promoting domestic

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competition. Competitor collaboration in setting standards may also be directed at protecting an indigenous technology rather than promoting consumer interests.

IV. Asian Legal Systems

Of course, the way IP and competition laws are enforced and their effectiveness depends on a country’s legal system. Even where substantive laws are the same, different legal systems may enforce IP or competition laws differently. This may be due to differences in policy goals or procedural differences (the way or sophistication in which economic evidence is dealt with by regulators or courts for example). Asian legal systems vary but, in general, law in Asia is not as important as it is in the West. Glenn describes Asian legal systems in the following way:

> It is law which is secular in origin, yet greatly limited by its formal version, by its reach and effect. In China the limits are the secular ones of Confucianism; elsewhere, Asian religions have done the same work of limiting the role of the lawyers. Everywhere in the Asian tradition … there is denial of the primary role of secular law-makers and denial of the idea of a sweeping religious law. In short there is denial everywhere of a primary role for what is usually known as law. It is a secular, largely informal, legal tradition, though informed by great learning.23

Still, Asian law has been greatly influenced by the West. Japan looked to Europe in the early twentieth century. China followed. However, the US occupation after the Second World War impacted Japanese law and led to a US style competition law in 1947. Dutch, English and French law initially influenced law in South East Asia, but its influence declined in Cambodia, Laos and Vietnam post-independence. Common law is still important in Brunei, Hong Kong, Malaysia and Singapore.

V. Why Should Countries Introduce Competition and IPLaws?

Countries will only introduce (or enforce if forced on them) competition law and IPLaws when they yield tangible, positive, benefits. Both IP laws and competition law are highly technical, particularly where complex issues involving innovation and dynamic competition are concerned. Their successful introduction requires the kinds of skills that are limited or non-existent in developing countries. So some time may be needed to develop the necessary skills and expertise to identify whether a patent application is novel or whether business conduct is anti-competitive—and whether an anti-competitive practice can be realistically improved by intervening.

Governments may give a low priority to protecting IPRs to ensure their citizens have low-price access to patented or copyrighted products. For example, a number of developing countries allow the importation or domestic production of generic drugs despite

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patent protection. Preventing anti-competitive practices may be also given a low priority by governments. Well organised groups such as wealthy families who control legislatures may benefit considerably from government-protected cartels. Competition laws may threaten that wealth and so they may wield their political influence to prevent the introduction of competition laws. Or, a government may believe there are greater benefits from focusing on general competition policies such as reducing tariffs or opening up markets by reducing government-imposed entry barriers than introducing a competition law. Domestic competition may be restricted as part of an export-oriented industrial policy. For example, local collaboration between competing firms may be allowed in order to develop sophisticated products for export in the longer term.

However, countries in Asia have increasingly introduced competition and IP laws. Sometimes they have been forced on them as part of a financial bail-out from the International Monetary Fund (IMF) or World Bank or introduced as a quid pro quo for access to developed country markets (under Trade-Related Aspects of Intellectual Property Rights (TRIPS) or free-trade agreements). Sometimes this has been resented—particularly as sometimes the terms imposed have been more onerous than for similar recent assistance to developed countries in Europe.

VI. IP Laws, Competition Law and Economic Growth

How important are intellectual and competition laws to economic growth? This is a difficult issue to resolve both theoretically and empirically. Also, the evidence of the effect of both is mixed. A recent study by Falvey, Foster and Greenaway examined the relationship between IPRs and economic growth. They concluded:

The relationship between the strength of a country’s intellectual property rights (IPRs) regime and rate of growth is ambiguous from a theoretical standpoint, reflecting the variety of channels through which technology can be acquired and their differing importance at different stages of development. We investigate the impact of IPR protection on economic growth in a panel of 79 countries using threshold regression analysis. We show that whilst the effect of IPR protection on growth depends upon the level of development, it is positively and significantly related to growth for low- and high-income countries, but not for middle-income countries. This suggests that, although IPR protection encourages innovation in high-income countries, and technology flows to low-income countries, middle-income countries may have offsetting losses from reduced scope for imitation.

For competition law, Crandall and Winston conclude that competition law enforcement track should be limited to ‘the most egregious anti-competitive violations’. On the other hand, in a study undertaken for the Directorate General for Economic and Financial Affairs of the

European Commission, Buccirossi, Ciari, Duso, Spagnolo and Vitale empirically investigated the impact of competition law on total factor productivity (TFP) growth for 22 industries in 12 OECD countries over the period 1995–2005. They found a positive impact. In particular, they found the relationship was particularly strong with respect to the quality of enforcement. They note that “The effect is strengthened by good legal systems, suggesting complementarities between competition policy and the efficiency of law enforcement institutions.”27

For East Asia, Brahmbhatt and Wu conclude that:

Given the limited empirical evidence, it is probably unwise to draw firm conclusions for policy in East Asian or other developing countries. But a few observations can be hazarded. First, increased competition has many potential benefits … other than the impact on innovation, for example on firm efficiency and overall productivity growth (Ahn, 2002). Conclusions about the role of competition policy need to be based on an assessment of all of these effects. Second, the balance of empirical work cited finds a positive association between more competition between incumbent firms and innovation. While the study by Aghion, Bloom, Blundell, Griffith and Howitt (2005) reaches more qualified results, it too suggests that more competition is favorable for innovation when competition is low to start with—that is, when lack of competition is most likely to be of concern to policymakers.28

VII. IP and Competition Laws: The Experience in Asia

While there are differences in IP laws between countries, competition laws tend to be similar and cover anti-competitive agreements, abuse of dominance and anti-competitive mergers. However, in Asia there are differences between competition laws. For example, some competition laws include ‘fair competition’ provisions, consumer protection and, sometimes, IP provisions. While multi-lateral agreements exist on IP laws (eg the TRIPS Agreement), there is no equivalent for competition law.

Japan and South Korea have the longest experience in Asia with both laws. Recently, both have started to vigorously enforce their competition laws, including in situations involving possible conflicts with IPRs. However, most other countries in Asia have only recently introduced IP laws—due mainly to the TRIPS Agreement. However, enforcement is limited. Most Asian countries have now introduced competition laws—sometimes under external pressure. Recently, all countries in the Association of South East Asian Nations (ASEAN) committed to introducing competition laws by 2015, but it is unlikely that competition laws will be fully operational by then in Cambodia, Laos, Myanmar and perhaps the Philippines.

Countries concerned with overall welfare should develop policies towards competition and IP laws (and their intersection) that reflect their own particular circumstances. However, where they have been introduced as part of an international agreement or for financial aid, countries have generally copied the competition and IP laws of developed countries. It is arguable whether countries necessarily need either comprehensive competition laws or even

the same laws for abuse of dominance or mergers, or, regulate the intersection between competition and IP laws in the same way.

Business reaction to IP and competition laws will determine their effect. Asian business is usually conducted on the basis of long-term relationships with little recourse to law to settle disputes. So there is considerable interaction between executive, legislature and judiciary. As Michael Backman, an Australian expert on Asian business practices, says:

Those in business in Asia need to know about Asian politics because Asia’s politicians and governments typically are highly intrusive in business. They need to know about family structures and behaviour in Asia because families run most Asian business. They need to know about imperfections in the law because the rule of law is weak in many parts of Asia. And they need to know about what interests the locals because nowhere more do people and personalities count in business than they do in Asia. Business in the West might be about companies and corporations. But in Asia it is about people and personalities. In the West the demarcation between the business and non-business worlds tend to be well defined. In Asia its not.29

Backman goes on to point out that Asian family firms exist, apart from providing income, to: provide honour for the family and ancestral founders, to keep the family together and to provide them with jobs. Corporate structures are complex and lack transparency mainly to make it harder for family members to leave the family company. So “[a]ppeals for reform based on efficiency, transparency and better corporate governance in general are likely to fall on deaf ears in such cases.”30

Importantly, Backman also concludes that for many Asian businesses economic return is not important—in fact some Asian family-run business groups are not profitable, nor expected to be. To the extent that this is so then there may be implications potentially for competition law. For example a dominant family business may, to preserve the business, be more likely to price below cost or to use competition law to prevent a good takeover offer.

Reflecting the close reflections between government and business in Asia, corruption is rife. The World Bank Worldwide Governance Indicator’s project gives aggregate and individual governance indicators for 213 economies over the period 1996–2009. The World Bank ranks East Asian countries as follows in terms of control of corruption in 2009 (from best to worst): Singapore; Hong Kong; Brunei; South Korea; Macao; Malaysia; Thailand; Vietnam; China; Indonesia; Philippines; Laos; Cambodia and Myanmar. For rule of law in 2009 the rankings were almost the same: Singapore; Hong Kong; South Korea; Brunei; Macao; Malaysia; Thailand; China; Vietnam; Philippines; Indonesia; Laos; Cambodia and Myanmar.31 Competition and IP law enforcement may reflect these vested-interest relationships rather than economic or other goals pursued in the national interest.

However, pressure from membership of international organisations like the World Trade Organisation (WTO) has increased pressures for Asia to rely less on informal relationships and more on economic governance through legal rules by lawyers and by judges (a process called ‘juridification’). The importance of ‘rule of law’ to development has been

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extensively discussed (See Carothers,32 and Gillespie for example,33) Two important areas discussed have been the importance of enforcing property rights (including IPRs) and reducing bureaucratic discretion in the economic system via increased transparency and accountability within legal constraints (and so predictability).

Whether IP or competition law is enforced depends on the strength of traditional relationships and political institutions. Political systems in Asia range from military dictatorships to those controlled by elites to a small number of democracies. The degree of economic sophistication also differs considerably.

VIII. Do Asian Countries Pursue Different IP and Competition Law Goals?

Some countries may not see the development of indigenous R&D as a national priority. Instead, reflecting past experience, attracting technology via foreign direct investment might be preferred because it yields more immediate economic benefits (and this is consistent with the evidence presented above). IP law protection is only necessary where the IP protected goods and services are sold. So a foreign investor or an innovator in the local country may not be concerned with local IPR protection if the goods are fully exported (or the secrets are mainly protected by trade secrets). However, where there is also a domestic market for those goods or services, then host country IPR protection is important to the foreign investment decision. However, R&D does not depend solely on the ability to appropriate the fruits of innovation. Technological opportunity, government R&D subsidies or tax policies are also important to location decisions.

Similarly, competition law should be seen in a broader policy context. Industrial policies that promote domestic monopolies to protect against potential foreign dominance of an important industry (important either because of strategic importance or because the wealth created to particular groups or families with political influence) will affect likely competition law enforcement. Competition law could be used to target dominant foreign companies—for example, correcting ‘abuses’ such as refusals to supply by forcing them to transfer technology.

As mentioned previously, in the United States (and the approach is generally followed in Europe and Australia) it is generally accepted that IP and competition laws share the same goal. As the United States Department of Justice and FTC puts it:

Over the past several decades, antitrust enforcers and the courts have come to recognize that intellectual property laws and antitrust laws share the same fundamental goals of enhancing consumer welfare and promoting innovation … Consequently, antitrust and intellectual property are properly perceived as complementary bodies of law that work together to bring innovation to consumers: antitrust laws protect robust competition in the marketplace, while intellectual property laws protect the ability to earn a return on the investments necessary to innovate.

Both spur competition among rivals to be the first to enter the marketplace with a desirable technology, product, or service.\footnote{US Department of Justice and the Federal Trade Commission, \textit{Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition} (Washington, 2007) 1.}

However, developing countries place priority on national development goals which may mean the two laws serve different goals and are enforced differently. If so, there will be conflict between them. For example, competition law may be used to force technology transfer to indigenous firms and IP standards set to benefit indigenous firms. The kinds of conflict that arise are likely to be different depending on the underlying policy objectives and stages of development in each country.

As economic interdependencies increase and technology becomes more important to economic growth, the relationship between IP and competition laws in Asian countries will become increasingly important. The interface between them has been considered mainly in the United States and European Union within competition law not IP law. Both IP and competition laws are national in scope. So the policy choices made and the recognition of IPRs and competition laws are country-specific, subject to international treaties.

\section*{IX. The Conference Background Papers}

The conference was divided into two sessions. First, three presentations from experienced distinguished speakers from the United States provided the context for the conference. The United States has the most sophisticated jurisprudence dealing with the interface and has a strong emphasis on assessing the economic effect of alleged anti-competitive business conduct. William Kovacic, former Chairman of the US Federal Trade Commission, spoke about the interface from a regulator’s perspective. Doug Ginsburg, former Chief Judge of the US Federal Court of Appeals for the DC Circuit and Eric Fraser, Executive Director of Research for the Committee on Capital Markets Regulation in the United States, looked at the importance of economics in US competition law jurisprudence. Gregory Sidak, the Chairman of Criterion Economics and David Teece, Director of the Centre for Global Strategy and Governance in the Haas Business School at the University of California, Berkeley, spoke on deficiencies in the way dynamic efficiency is treated in US competition law.

Kovacic, who has been involved in the introduction of many competition laws around the world, focused on the challenges facing competition law regulators. Reflecting the emphasis on consumer welfare in the United States, he stresses that ‘… a competition agency should direct its enforcement resources toward those practices posing substantial dangers for consumers, the cessation of which promises the largest rewards for society’. However, this task requires considerable expertise and ‘industry-specific knowledge because the role that IP rights play in competitive processes varies substantially from industry to industry’. For example:

many biotechnology companies … conduct basic research to identify promising products then partner with a pharmaceutical company to test and commercialise the product. Patent protection can be essential to attract funds from capital markets, and facilitate licensing and joint venture arrangements.
A regulator should not just be concerned with competition law enforcement but also with other policy tools such as research, advocacy and education.

Kovacic stresses the importance, from a policy perspective, of considering the IP–competition law interface from a broader perspective than just competition law. For example, in some circumstances it might be better to improve outcomes through the IP system. This was the approach taken in a report by the US FTC in 2003 that recommended judicial and legislative reforms and changes in the way the Patent and Trademark Office operated in the United States. Kovacic discusses a number of the recommendations, including the issuing of questionable patents, publication of patent applications, etc. The FTC Report not only identified how the patent system undermined the ability of competition to promote innovation, but also stressed the importance of economics in setting policy dealing with the intersection.

Ginsberg and Fraser discuss the role of economic analysis in competition law both in regulatory bodies and the courts. They suggest that other countries should look to US competition law experience ‘both to avoid repeating its mistakes and to emulate its successes’. For developing countries in Asia who lack expertise in economics and in dealing with the interface this is a particularly important point. Business needs to be confident that its competition regulator is acting predictably. To ensure bipartisan political support, policy makers may need to be assured that competition law decisions made are in the best economic interests of the country. Crucial to whether competition law improves actual economic outcomes depends not only on whether the focus is on economic outcomes but also whether regulators and judges are proficient in economics.

Ginsberg and Fraser point out that, initially, US agencies subordinated economists to lawyers. This led to a situation where

… the economists were routinely put in the position of trying to explain why a case the lawyers said they could win should not be brought for lack of economic merit. When economists and lawyers within an agency took diverging views on a particular issue—a common occurrence—the lawyers typically won.

This situation started to change in the mid 1960s. Reflecting the increased use of economics by the regulatory agencies, the US Supreme Court became less concerned 'with vague social and political goals' and so 'the scope of antitrust liability narrowed; the Court condemned only those transactions and practices that economic analysis showed to be inimical to consumer interests'. So the focus shifted away from protecting inefficient producers, especially small inefficient businesses. As a result, Supreme Court decisions became more predictable and the 'degree of agreement among the nine Justices steadily increased'. So, economics contributed ‘… to predictability and stability in the law, which are essential elements in a rule of law regime’. This is an extremely important lesson for new competition law regimes, particularly in complicated fact situations involving IPRs. To improve economic outcomes, regulators should understand the likely effects of any intervention. However, good economists skilled in industrial organisation are thin on the ground in Asia, even, at least initially, in developed economies like Singapore. Sound economic analysis is even more important when highly complex issues like the impact of competition law on innovation are involved.

Sidak and Teece are critical of current approaches to competition law. They argue that 'using static analysis to address antitrust issues in a dynamic economy is unlikely to improve consumer welfare and that a more dynamic analytical framework increases
the likelihood of helping rather than hurting consumers.’ They argue that there is little evidence that innovation is related to market concentration and so ‘framing competition issues in terms of monopoly versus competition appears to have been unhelpful.’ They say that innovation depends on rivalry but market concentration does not necessarily impact rivalry. So there is more to innovation than just competition and monopoly. As innovation is risky, costly and requires access to capital, then access to capital either externally or internally (from a multi-product income stream, for example) are also important. They point out that traditional static analysis focuses on detecting market power in product markets, but that dynamic analysis of competition stresses the process and less the outcomes.

Unlike the US Modernisation Commission, which concluded that dynamic competition could be accommodated within existing competition analytical frameworks, Sidak and Teece argue that the tools of static analysis should be used sparingly, if at all, because static analysis could lead to decisions that impede dynamic competition. In particular, they argue that the presumption that more competitors are always better is wrong—the goal is not just to lower price, but also to protect innovation. In markets where innovation is important, market conduct does not primarily depend on market structure but on internal organisational factors: standard operating procedures, investment strategies, and improvement routines. As a consequence, market concentration is likely to be an outcome of market selection, which in turn depends on the uneven exploitation of learning opportunities. Thus, they argue, concentration has little to do with market power.

Focussing on dynamic competition, they argue, eases the tension between IP and competition law. They are better harmonised if competition law focuses on innovation as its primary goal. So they conclude:

\textit{Antitrust scholars must confront an inconvenient truth: innovation drives competition as much as competition drives innovation. Thus, antitrust analysis must recognize that advancing dynamic competition will benefit consumers most, certainly in the long run if not also in the short run.}

\textbf{X. Country Chapters}

Next, papers on most countries in Asia were delivered. Each country paper was co-authored by both an economist and a lawyer. As the intersection is likely to be different in each country, authors were given the discretion to deal with the issues in the intersection as they thought fit. However, authors were asked to provide a paper that incorporated the following: some background country economics including: the amount spent on R&D, types of research, government policies towards innovation, industrial development policies etc; some background to the competition law and IP laws and how the intersection is dealt with (if at all) and how the intersection should be dealt with in that country.

Three major themes emerged from the chapters. First, that IP statutes should also deal with competition law concerns. Second, the increasing importance that compulsory licensing is playing in the intersection in Asia (particularly for pharmaceuticals). Third, the considerable institutional constraints countries in Asia face in implementing both IP and competition laws. Of particular importance is whether an IP authority should defer to the competition authority or vice versa.
A. Australia

Bob Baxt (a lawyer and former Chairman of Australia’s competition regulator) and Henry Ergas (an economist who chaired an Australian Federal Government Inquiry into the intersection) look at the policy trade-off in Australia. They conclude that IPRs do not necessarily lessen competition but rather ‘It is the ambiguities and inconsistencies between the two legislative regimes that limit innovation and distort competition.’

In the first part of the chapter, Ergas argues that the debate about the intersection has been about exemptions from IP statutes rather than seeing competition issues within IP statutes. He says that

it seems reasonable to embody competition concerns in the IP statutes when those concerns form an intrinsic part of the eligibility tests for the right … however, the provisions themselves and the tests they embody ought to reflect the competition tests more widely in the economy.

So he believes there needs to be more consideration given to designing competition issues within IP statutes.

Baxt then looks at the treatment of joint ventures in Australian competition law. He points out that Australia ‘does not adopt a rule of reason in dealing with anti-competitive agreements’ which can impact on ventures involving IPRs. As cartel offences are now subject to criminal sanctions, he says ‘that limiting the operation of an appropriate rule of reason in the context of joint venture activity, may unintentionally provide further impediments to joint ventures generally, and in particular the development of intellectual property rights though joint venture activities’. He goes on to point out that there is some ‘indecision’ in relation to the interaction but

[o]ne consolation is that … the ACCC rarely faced problems surrounding the interface of competition policy and intellectual property. Perhaps that is because parties are not willing to risk pursuing arrangements that pose competition policy concerns with the ACCC.

B. China

Michael Jacobs, an academic lawyer from the United States and Xinzhu Zhang, an academic economist from China, look at the US and EU approaches to compulsory licensing. They conclude that they are different ‘not because they ascribe to different schools of economic thought, but because the different political and cultural beliefs that inform and animate them lead inevitably to different answers’. Hence they are skeptical of international convergence ‘around a single approach to complicated antitrust questions’. They then examine the experience in China. They conclude that the issue of compulsory licensing is so complicated that it is

… too soon to recommend any specific approach … [h]owever, certain preliminary steps should be taken. First, the Chinese authorities regulating issues involving IP and competition law should issue specific regulations and guidelines to clarify the meaning and likely application of the legal rules guiding law enforcement. Second, the administration of law enforcement should be improved to facilitate the co-ordination of enforcement agencies, avoid conflicts between them, and ensure their independent decision making on compulsory licensing. Finally, efforts on capacity-building in law enforcement should be stressed.
C. India

Vinod Dhall, a lawyer and the single member (and acting Chairman) of the Competition Commission of India from its establishment in 2003 until 2008, and Augustine Peter, an economist and Economic Adviser in the Competition Commission of India (CCI) examine the intersection in India. Interestingly, they point out that both India’s competition and IP laws contain provisions dealing with the intersection. For example,

… where during the course of a proceeding before a statutory authority (that would include an IP authority) a competition law issue is raised by any party, the authority may make a reference to the CCI for its opinion. The CCI shall give its opinion within 60 days. Thereafter, the statutory authority shall consider the opinion and give its finding recording the reasons for the same. The reference can also be made suo moto by the statutory authority. A mirror image of this provision exists in … the Competition Act allowing the CCI to make reference to a statutory authority to obtain its opinion and consider it before passing orders in the case.

They note that India now is a more mature economic with ‘greater capability within the economy for technological innovation and for operationalising innovations’ and so the ‘need for a balanced approach that will protect competition but not disincentivise innovation is quite clear’. As markets are likely to be more concentrated with high entry barriers, lower labour and other costs in developing countries, they advise that IP authorities be ‘mindful of the competition perspective in the grant of patent and other IP rights lest these create monopolistic positions and deny access to essential knowledge and skills’. They do suggest that the Competition Commission of India should ‘exercise forbearance and defer, as far as possible, to the powers given to the IP authorities under their respective jurisdictions’.

D. Indonesia

Cento Veljanovski, an economist with extensive experience in competition law in Europe and elsewhere, teamed up with Ningrim Sirait, a Professor of Law in Indonesia and one of the country’s most prominent competition law commentators. They stress that:

[in] developing economies and especially those with low R&D investment and innovation such as Indonesia … another layer of issues arise. There are basic questions regarding the legitimacy and coherence of both IPR and competition laws, the effectiveness and integrity of the enforcement agencies and courts, and the way the law is enforced. Further, since many developing economies are net importers of technology and goods and services protected by IPRs, there are distributional issues associated with the terms of trade and pricing of IPRs.

Article 50(b) of Indonesia’s competition law exempts ‘agreements related to intellectual property rights such as licence, patent, trade brand, copyrights, industrial product design, integrated electronic series, and trade secrets, and contracts related to franchises’. The Indonesian competition regulator (KPPU) issued guidelines on the intersection in 2010. They go on to point out that Indonesia’s competition law has ‘multiple objectives with very unclear guidance as to how these are to be balanced in any overall assessment’. To date there have been three competition law cases involving IPRs. The most recent case involved a breach of several competition law sections including price-fixing, a prohibition on cartels, restrictive agreements with foreign parties and abuse
of dominant position. The parties argued that because the products involved were patented they were exempt from competition law. However, the KPPU ordered the companies involved ‘to revoke certain supply agreements, cease further communications, and that Pfizer lower its price of Norvask by 65% and PT Dexia Medica its price of Tensivak by 60%’. They conclude that while Indonesia’s IP and competition laws are increasing in significance, of crucial importance in the future is the way the art 50(b) exemption is applied.

E. Japan

Steve Harris, a lawyer from the United States with considerable international competition law experience and Hiroshi Osahi, an academic economist, examine the interface in Japan. First, they note that there is a general exemption within Japan’s competition law for IP, ie art 21 says, ‘The provisions of this Law shall not apply to such acts recognizable as the exercise of rights under the Copyright Law, the Patent Law, the Utility Model Law, the Design Law or the Trademark Law.’

However, they point out that the ‘exercise of an IP right is not automatically exempted from the AMA’. In fact, the Japan Fair Trade Commission (JFTC) has issued several guidelines on the extent to which the The Act on Prohibition of Private Monopolization and Maintenance of Fair Trade (AMA) may be applied to IP-related activities—the most recent and most comprehensive in 2007.

They note that:

The IP Guidelines do not contain several of the criteria that the European Union has imposed to limit the applicability of antitrust law in refusals to grant access to essential facilities, including IP licenses, which are intended to limit interference with independent decisions on which counterparties to deal with to only ‘extraordinary’ cases.

However, they conclude that JFTC decisions ‘are consistent with the IP Guidelines, but are too sparse in analysis and too few in number to provide much needed detailed guidance on JFTC enforcement policy in this complex area.’

F. Singapore

Ashish Lall, an academic economist and Daryl Lim, an academic lawyer and writer on Singapore, note that Singapore is in the process of a government-sponsored transition towards an innovation-driven economy. It has a strong electronics sector (particularly in semiconductors) and is promoting new sectors in biotechnology, clean technology, nanotechnology and interactive digital media. In less than 20 years, Singapore has moved from a jurisdiction with little IP protection to a very strong IP protection regime. Recently, it also introduced a competition law based on that of the United Kingdom/European Union. The Competition Commission of Singapore has issued guidelines on the intersection based largely on those of the Office of Fair Trading in the United Kingdom. They conclude that:

Singapore will benefit from the experience elsewhere but must decide how best to address the Interface, either from within the IP system or within competition law, or a cocktail of both. But ‘competition law is an area of where law in which there is little scope for absolute concepts or
sharp edges\textsuperscript{35} and the actual contours of the law will not be known until Singapore courts have had opportunity to decide on cases dealing with the Interface.

G. South Korea

Sang-Seung Yi, an academic economist and Seongwook Heo, an academic lawyer, evaluate the Korean Fair Trade Commission’s (KFTC) merger decisions in South Korea over the last 30 years through the lens of dynamic competition. South Korea’s IP law and competition laws are mature. While they say that the KFTC over 30 years has had remarkable success in cartel enforcement and competition advocacy, their approach to mergers is appropriate only where domestic consumers are involved. They suggest an alternative model should be used in reviewing mergers involving more than one country. They argue the KFTC should:

\ldots consider the total national social welfare standard over all geographical markets combined (which considers gains in the foreign markets as legitimate efficiencies to be weighed against anti-competitive losses in the domestic market) as the proper welfare standard in evaluating mergers.

Attempts to ‘restore competition to the pre-merger level in the domestic market through structural remedies runs the risk of jeopardizing the entire merger, when the synergy effects are linked between the domestic and foreign market operations’. Instead, they argue that ‘actual foreign competition in foreign markets serves as a stimulant for dominant domestic firms (which compete in foreign markets) to undertake innovative activities that ultimately benefits domestic consumers (although they suffer short-term losses at any point of time).’

H. Thailand

McEwin, an academic economist/lawyer and Thanitcul, an academic lawyer (and a former Member of Thailand’s Trade Competition Commission (TCC)), look at the intersection via the compulsory licensing of pharmaceuticals in Thailand. Driving policy differences in health are differing perceptions of the role of IPRs. Health groups argue a ‘privilege’ view which sees IPRs not as property rights but granted by government to promote public policy goals like health as well as innovation. At the opposite end are those who believe that IPRs are \textit{uber-rights} or rights that are stronger than other property rights—who see compulsory licensing as theft.

Compulsory licensing is used by both developed and developing countries. Thailand has granted compulsory licenses for medicines on the basis of public use ‘to allow universal access to essential medicines’. The reaction of one multinational pharmaceutical company, Abbott Laboratories, whose drugs were subject to compulsory licensing, was to refuse to continue to register new drugs in Thailand. This \textit{cross-border refusal to supply} was challenged on competition law grounds in Thailand. Elsewhere, a domestic refusal to supply would have been resolved in two possible ways—by examining whether the refusal to supply was a misuse of patent law or whether the refusal by a dominant firm breached competition law. However, there are differences in the way refusals to supply are treated in the

\textsuperscript{35} \textit{Racecourse Association v OFT} [2005] CAT 26, Case Nos 1035/1/1/04 at [167] (‘[C]ompetition law is not an area of law in which there is much scope for absolute concepts or sharp edges’).
United States and European Union. The United States is reluctant to intervene in refusal cases (including in cases involving IPRs) because of the possible impact on innovation. This reflects the fact that the United States is the most innovative nation. On the other hand, in Europe, there is more of a concern with whether the refusal distorts markets and harms competitors, perhaps reflecting a lesser concern with innovation.

In 2007, the TCC found the withdrawal of the drug registrations did not breach the Thai Competition Act because Abbott was not a dominant business operator. In 2008, the new Minister of Public Health reviewed the compulsory licenses and recommended that they remain in place but that the licenses could be revoked by the Minister of Commerce, the Minister responsible for competition law. Whether Thailand’s compulsory licensing decision chilled R&D in Thailand is difficult to determine. The intervention was mainly to reduce drug prices in Thailand (although some argue it was to promote a generic drug industry in Thailand). The impact on other industries in terms of reduced foreign direct investment or reduced access to export markets is yet to be seen.

I. Vietnam

Doan Tu Tich Phuoc and Bui Nguyen Anh Tuan, both staff members of the Vietnam Competition Agency, look at the intersection in Vietnam. They point out that ‘innovation is not currently regarded as part of Vietnam’s core development policy’. For competition law they note that while

> the main purpose of the law was to create an environment of fair competition and to promote a competitive market structure … some people believe that one of the main reasons … was the government’s concern about threats from larger multinational companies that could enter the domestic market … on the basis that in many countries, competition law had proved itself as an effective tool in deterring market power and protecting local SMEs as well as consumers.

Regulations governing compulsory licenses were first introduced into the Civil Code in 1995 and developed further within the Intellectual Property Law 2005 which allowed for compulsory licensing to deal with anti-competitive practices. While there is regulation of licensing contracts (including provisions that prevent IP owners from misusing or abusing their IP rights), there are no specific provisions dealing with horizontal agreements like patent pools or cross licensing. As a result, anti-competitive horizontal agreements involving IPRs can be exempt if reduced costs and the promotion of technological advances enhance the competitiveness of small and medium sized enterprises (SMEs), etc.

Although compulsory licensing is available it has not been used (except for Tamiflu in 2005, where the patent owner was not able to supply Vietnam and essentially agreed to the licence, but no action was necessary as the bird flu epidemic was soon over). Different government agencies handle compulsory licensing in their areas of responsibility. The authors say that ‘inadequacies in the laws regarding the intersection have led to inadequate enforcement where no compulsory licensing cases have been reported in 15 years for inventions and plant varieties. Meanwhile, other IPRs such as trademarks may be abused to deter competition.’ They conclude that despite 25 years since the ‘economic renovation’, Vietnam is still a developing country dependent on agricultural or labour-intensive exports, with negligible R&D.