

The Economic Impact of Intellectual Property: Supporting SMEs

*Views expressed in this presentation are those of the author and not necessarily those of WIPO

Impact of Intellectual Property

- It has been generally stated, based mostly on the experience of developed countries, that intellectual property system plays a major role in:
 - Stimulating technological innovation
 - Improving trade
 - Enhancing competitiveness
- In other words there is a positive correlation between strengthening of IP rights and economic growth
- However, does the same apply to developing and least-developed countries?

Impact of Intellectual Property

- An alternative view is that strong IP regime may
 - Hinder innovation
 - Inhibit diffusion of knowledge and technology development
 - Have adverse implications for the access and affordability to lifesaving drugs and education
- Is there adequate empirical data to reach an informed conclusion regarding the economic impact of IP?
- Several countries have called for a balanced IP system which integrates the development dimension
- How does the IP system impact on SMEs in developing countries?

See WIPO-UNU Joint Research Project - Impact of the Intellectual Property System on Economic Growth - Fact-Finding Surveys and Analysis in the Asian Region at http://www.wipo.int/export/sites/www/about-ip/en/studies/pdf/wipo_unu_07_india.pdf

Impact of Intellectual Property

- Certain published data indicate that:
 - Over 90% of the 'live' patents belong to nationals and residents of USA, Europe and Japan.
 - In recent years there has been a patent filing surge in NE Asia (mainly China and South Korea).
 - There has been negative flow of royalty income from developing countries
 - How about the rest of the world?
 - The fact of the matter is that **at the present moment**, barring a couple of developing countries, IP appears to be most helpful to developed economies.

Impact of Intellectual Property

- Even in developing countries that may have a degree of absorptive technological capacity, higher standards of intellectual property protection have failed to foster the transfer of technology through foreign direct investment and licensing.
- In effect, corrective measures are needed to address the inability of existing IP agreements and treaties to promote a real transfer of technology to developing countries and LDCs.

Innovation, IP and Growth

- Innovation (creation and adoption of new ideas) is a very powerful factor that helps to determine progress of modern economies.
- 30 percent to 40 percent of all U.S. gains in productivity and growth over the course of the 20th century is linked to economic innovation in its various forms.
- Today, some two-thirds of the value of America's large businesses can be traced to the intangible assets that embody ideas, especially the intellectual property (IP) of patents and trademarks.
- Promoting and protecting new intellectual property should be a high priority for U.S. policymakers.

Shapiro and Pham (2007)

Innovation, IP and Growth

- ...U.S. policymakers should foster the creation of more intellectual property (IP) and work harder to protect the IP that American companies already have.
- However, with or without IP protection, good ideas will be copied, modified, improved upon and invented around. Today's fresh new invention is destined to become tomorrow's stale old idea.
- If America is to remain the leader of the economic pack, we must keep on innovating in the future — just as we have done in the past.

A. Blinder, Economic Effects of Intellectual Property-Intensive Manufacturing, 2007

Innovation, IP and Growth

- ...the incentive to create IP depends, in part, on our ability to protect it.
- But it also depends on other things, such as
 - **entrepreneurship,**
 - **a sensible tax system,**
 - **a steady flow of scientific and engineering talent,**
 - **vibrant capital markets and**
 - **government support for basic science.**
- Together, these and other ingredients comprise the raw materials for faster economic growth, higher productivity and higher wages.

IP and SMEs: ground reality

- Most studies on IP and SMEs conclude that SMEs, especially those in developing economies,
 - Are generally unaware about IP and its role in enhancing competitiveness
 - Find the cost of obtaining and maintaining IP rights daunting
 - Find the cost associated with defending their IP rights beyond their means
 - Find the IP system complex
 - Lack the competencies required to effectively manage IP assets
 - Find IP rights a barrier to acquisition of technology

IP and SMEs: opportunities in a flat world

- Knowledge economy has fundamentally changed the basis for firm level competitive advantage and eroded some of the traditional form of firm differentiation
 - Lower cost of information flow
 - Increase in the number of markets
 - Liberalization of product and labor markets
 - Deregulation of international financial flows
- “Wealth creation in a world of heightened competition comes down to developing and owning difficult to replicate (intangible) assets, and orchestrating them astutely.” (Teece, 2000)
- In other words having dynamic capabilities
- This is applicable to both high tech and low tech industries

The modern knowledge economy: Intense Competition

- Knowledge, competence and **intellectual property** are the most significant assets; others intangibles include brands, reputation and customer relationships
- Competitive advantage can flow from ownership and successful deployment of non-tradable assets
- Knowledge assets, especially competencies, are difficult to trade since the market has many imperfections
- Intellectual property regimes are stronger today than before and acts as a major counterforce to the ease of imitations.
- The ability of firms to keep knowledge tacit or protect through IP determines its ability to earn 'rent' in the market.

The modern knowledge economy: Intense Competition for SMEs

- Knowledge assets are often intermediary products and require complementary assets to yield value.
- Degree of ownership, access or control of complementary assets therefore become a major issue in the competitive advantage equation.
- One can have a fabulous technology for making car, However, if one does not have the manufacturing or distribution facility it would not be worth much.
- Ownership of difficult to imitate complementary assets is an important source of competitive advantage.

SMEs and Venture Capital

- Value creation in a technology-based enterprise is a critical element in obtaining venture capital for SMEs.
- One of the major problems faced by new technology seed and start-up enterprises is access to the first round of funding, either through debt or venture capital investment.
- VCs seek to evaluate both the strength of an innovation and the ability of the entrepreneur to motivate commercialization.
- Exclusive rights offered by the intellectual property system are often the main assets from which an SME technology-based enterprise can benefit.
- The appropriate use of the intellectual property system may contribute to bring high rates of return on capital, which is crucial in order to attract venture capital investors to an SME.

Venture Capital and SMEs

- ❑ Venture capitalists want to maximize returns and minimize risks.
- ❑ A new technology enterprise cannot normally afford litigation. It needs to devote its money, time and resources to technology development and commercialization.
- ❑ The threat of an expensive lawsuit may be sufficient to reduce the probability of venture capital financing.
- ❑ Patent lawsuits cost about \$500,000 per claim if brought to trial, and trade secret suits cost from \$300,000 to \$500,000.
- ❑ Thus, intellectual property in the form of **a trade secret** may be more attractive to venture capital investors than a “weak” patent that may be open to litigation.

SMEs in China

- More than 99% of all enterprises
- Contribute 60% of GDP
- Contribute 50% of Tax revenue
- 75% of new jobs
- More than 60% patent applications

China - SME Support policy and systems

- 1985 – Creation of regional/provincial patent info. centres
- 2003 – Law on Promotion of SMEs
- 2007 – Policy on Supporting Technological Innovation of SMEs (includes IP)
- 2009 – Ministry of Finance (MOF) creates a \$15 million fund for foreign patent applications by SMEs [75,000 \$ per applicant]
- IP Promoting Policies for SMEs

IP Support System for SMEs in China

- SIPO takes the lead as IP Support organization

- 50 overseas IPR maintenance centre in provinces
 - Patent information Centre
 - Customer service centre offers free business IP advisory service to SMEs

- China Intellectual Property Training Centre (CIPTC)

SMEs in India

- contribute 8 per cent of the country's GDP
- 45 per cent of the manufactured output
- 40 per cent of its exports
- provide employment to about 60 million persons
- 26 million enterprises.
- labor to capital ratio in MSMEs and the overall growth in the MSME sector is much higher than in the large industries.
- The geographic distribution of the MSMEs is also more even.

SMEs in India

- MSMEs in the country manufacture over 6,000 products
 - food products (18.97%),
 - textiles and readymade garments (14.05%),
 - basic metal (8.81%),
 - chemical and chemical products (7.55%),
 - metal products (7.52%),
 - machinery and equipment (6.35%),
 - transport equipment (4.5%),
 - rubber and plastic products (3.9%),
 - furniture (2.62%), paper and paper products (2.03%) and leather and leather products (1.98%).

IP filings by Indians in India

- 120,000 out of a total of 130,000 trademarks applications filed in 2008-09 at the Indian TM Office. [645 at USPTO]
- 4,000 out of some 40,000 patent applications filed at the Indian Patent Office.
- 4,300 out of a total of some 5,500 industrial design applications filed at the Indian Design Office
- 45 Geographical Indication applications
- Share of applications filed by MSMEs?

Promotion of Innovation in India

- Ministry of Science and Technology issued the guidelines "Instructions for Technology Transfer and Intellectual Property Rights" in March 2000
- The Science and Technology Policy released in 2003 focuses a great deal on the transformation of new ideas into commercial successes, which is considered vitally important to the nation's ability to achieve high economic growth and global competitiveness
- Fiscal and other incentives
 - exempt from the excise duty for a period of 3 years provided such goods are manufactured by a wholly owned Indian company and such goods are designed and developed by such Indian company and the goods so designed are patented in any two countries outside India namely, USA, Japan and any country of the European Union.
 - Bulk drugs based on indigenous R&D are exempt from drug price control for a period of 5 years provided they are produced from the basic stage by a process of manufacture developed by the unit through its own R&D efforts.

Promotion of Innovation in India

- Weighted tax deduction @ 150% on R&D expenditure is available to companies engaged in the business of biotechnology, or the business of manufacture or production of drugs, pharmaceuticals, electronic equipment, computers, telecommunication equipment, chemicals and manufacture of aircraft and helicopters.
- Depreciation allowance at a higher rate is available in respect of plant and machinery installed for manufacturing goods based on indigenous technology developed in recognized in-house R&D units, Government R&D institutions, national laboratories and Scientific and Industrial Organizations (SIRO). The present rate of depreciation for plant and machinery is 40% as against 25% for other plants and machinery.
- Revenue expenditure on scientific research, by recognized R&D units, on activities related to the business of the company is allowed full deduction.
- Weighted tax deduction of 125% for expenses on sponsoring research programs at National laboratories functioning under ICAR, CSIR, ICMR, DRDO, Department of Biotechnology, Department of Atomic Energy, Department of Electronics; IIT and universities.

SME Support Institutions in India

- Ministry of Micro, Small and Medium Enterprises (Federal)
 - Office of Development Commissioner
 - State SME development institutes (DI-MSME)
 - Intellectual Property Facilitation Centers (32)
 - Financial Support for filing patent and GI applications
 - Assistance in commercialization
 - IP Training

- Ministry of Industry
 - Department of Industrial Policy and Promotion (DIPP)
 - The Industrial Property Office
 - State Departments of Industry

SME Support Institutions in India

- Ministry of Science and Technology
 - TIFAC
- Other Federal Ministries (Information Technology, Biotechnology, Textiles, Health, Human Resources, AYUSH)
- Chambers of Commerce at the federal and state levels

THANK YOU

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