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## ROLE OF TECHNOLOGY TRANSFER OF INTELLECTUAL PROPERTY IN ECONOMIC GROWTH OF A NATION

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### ***Abstract***

Intellectual property rights have given an assurance and impetus to technology creators by giving an exclusive right. However, this exclusive right of intellectual property was modernized by TRIPS agreement which made technology as a tradable commodity, simultaneously giving rise to transfer of intellectual property rights with such technological exchanges. However, with the rampant rise in technological development, it is important to study and analyse the impact of technology transfer and exchange of intellectual property rights through technology transfer agreements on the economy of a nation.

**Keywords**- Intellectual property, Technology transfer agreements, Licensing, uncompetitive market, negotiation skills

### **1. Introduction**

Intellectual Property Rights are recognised since time immemorial by awarding monetary benefits in exchange of intellectual prowess in military or Courts of the King. However, the actual implementation and safeguarding of Intellectual Property (IP) rights, specifically trade related interactions of the IP rights boomed after the TRIPS<sup>1</sup> agreement. The TRIPS agreement provided technology as an exchange commodity, thereby leading to a wide scale panorama of technological growth worldwide with major focus on innovation and modifications. Since Intellectual property laws gives exclusive and proprietary rights to owners of the Intellectual property, competitive trade practices with technology as trade exchange is highly contentious due to technological and monetary disparity. Although TRIPS have culminated a booming culture of technology as trade exchange, however a healthy exchange and transfer of technology and innovation in the public domain is desirable to promote the desire of scientific fervour.

### **2. Technology transfer and means to achieve it**

Technological exchange occurs in the form of formal or informal exchange of technology. The informal exchange of technology includes reverse engineering of products, or transfer of technological know how through informal communications. The formal way of technological exchange is known as technology transfer, which includes transfer, exchange, or cross interactions of intellectual property rights, especially in the form of patent rights. The formal way of technological transfer includes a legal machinery to transfer the intellectual property rights.

As per the law dictionary, the definition of technology transfer<sup>2</sup> is provided as follows:

*"1. Assigning technological intellectual property that is developed in one place and sending it to another by legal means.*

*2. Process of turning technological and scientific advances into a marketable service or good."*

<sup>1</sup> TRIPS Agreement, 1994, § Article-1

<sup>2</sup> Black's law dictionary, 2<sup>nd</sup> edition (1910)

### Formal way:

There are a number of formal ways to achieve these forms of technology transfer such as:

1. Licensing<sup>3</sup>- Licensing of intellectual property includes a technology transfer agreement between two or more parties to exclusively give a right to use or sell or make the technology having a patent right in exchange of monetary benefits. In certain circumstances, cross licensing of technology or patents occur between two or more parties for encouraging technological development and foster economic benefits.
2. Franchise- Franchise agreements provide a license to sell the technology by a vendor or a user. The technology is patented by an entity and the ownership rights vests with the patentee, however the selling rights of the technology is transferred to a party of the franchise agreement in exchange of monetary benefits.
3. Joint Venture- Joint ventures often includes cross licensing of technology patents and thereby form a new corporate entity which has the technological prowess over the other competitors. These are the strategies adopted by the organisations to incorporate or launch a new technology into the market and thereby collaborate for promotion of a profitable business structure.
4. Foreign Direct investment (FDI)<sup>4</sup>- FDI refers to monetary investment of a foreign corporate entity into a domestic corporate entity in exchange of technology transfer of intellectual property or intellectual property portfolio. The FDI is an upcoming mode of technology transfer which enables ease

of controlling interest of a corporate entity without takeover battle.

5. Mergers and Acquisitions- One of the unpreferable modes of technology transfer is merger or acquisition of a corporate entity with another corporate entity. The merger agreement stipulates the transfer of intellectual property rights to the new corporate entity formed and thereby the economic impact on the market and the competitors must be analysed for uncompetitive practices in these circumstances.

### 3. Effectual consequences in Asian Countries

The recent trend in technology transfer is gaining more acceptance from Asian universities than any of the research and development laboratories of big corporations across the world. The Asian universities are effectively entering into negotiations for technology transfer of their intellectual property portfolio with wealthy parties, however the universities lack the professional edge to mediate a technology transfer negotiation which is beneficial for the university in the monetary and ownership rights aspect. This problem was addressed by World Intellectual Property Organization (WIPO) and they have developed a set of modulation means to accentuate the process of technology transfer among the universities and various market players in the Asian countries by fostering educational and vocational training.

In order to address the above problems, the WIPO Roundtable on Development of University-Industry Partnerships for the Promotion of Innovation and the Transfer of Technology took place on 26 and 27 April, 2005, in Tokyo<sup>5</sup>. The major modulations mentioned in the conference by WIPO are as follows:

1. Negotiation techniques and methods for University-Industry(U-I) collaboration.

<sup>3</sup> Daren Tang, The Direction of Innovation, World Intellectual Property Report 2022, 29 (2022).

<sup>4</sup> Karan Bhutani, Role of Intellectual Property in Technology Transfer, Information Security Buzz (Jan 8, 2016, 20:52 pm), <https://informationsecuritybuzz.com/role-of-intellectual-property-in-technology-transfer/>

<sup>5</sup> Kamil Idris, Technology transfer, intellectual property and effective university-industry partnerships, The Experience of China, India, Japan, Philippines, the Republic of Korea, Singapore and Thailand, 3 (2005).



2. Developing a national policy framework by each country to regulate the profit margins by such U-I collaboration.
3. Framework for managing the intellectual property rights for U-I collaboration.
4. Different mechanisms and schemes for funding.
5. Appointing and training personnel for U-I collaboration.
6. Each University sets their individual policies for intellectual property and technology transfer.
7. Allocating the inventorship issues and sorting the division of rights during such technology transfer.

These policies have been developed with the major focus of Asian countries like India, Japan, Singapore, China, Philippines and Korea specifically strengthening the weak IPR policies to be at par with global standards. The above-mentioned initiatives equip the Asian universities to have a level playing field with wealthy corporate moguls and simultaneously receive monetary benefits as royalties for fostering further research and development.

#### 4. Impact on economic growth

There are wide implications of technology transfer on the economy and the market of any particular country or even a local area. The rampant mode of technology transfer through technology transfer agreement and mergers often leads to an uncompetitive market, with a single player enjoying a dominant position in the market. There are numerous means of transferring the technology in the so-called arena of Global North and Global South and these are facilitated by various trade channels among these countries<sup>6</sup>. The technology transfer agreements not only foster trade relations between corporate entities, but also gradually reduces the gap between a global soft power and hard power.

The major impact on the economy of a country happens due to the inflow of new technology which increases the efficiency and working conditions of the population residing there, simultaneously it also puts enormous burden on the government to try and test the technology at a reasonable price and make it accessible to the public<sup>7</sup>. Technology transfer acts an easy tool to bridge this gap and provide the technology in the hands of the party which has the means to make the technology accessible to all.

This major problem is being encountered by many developing nations like India, who are apprehensive about entering into a technology transfer agreement as it takes a toll on the financial resources of the country at the present stage though such technology may lead to an expansive growth and profitability in the longer run. This often occurs due to lack of knowledge about the technology or lack of negotiating skills of the parties due to unequal status. Another reason for such problem is the lack of valuation tools to project the future economic worth of the technology in the market.

Technology transfer must also include technology absorption within its ambit. The technology transferred through formal and informal means will make significant difference if its utilised properly by the technology end users<sup>8</sup>. Arrangements should be made for not only smooth transfer but also smooth transition of technology from the owner to the vendor. These market implications make the negotiations for technology transfer a difficult ball game and thus leads to major financial and economic issues which needs to be catered to immediately. However, the present market is receptive towards economic growth through technology transfer agreements and the Asian countries, especially India, is slowly digressing from technology user to technology creator for

<sup>6</sup> Kishore Mahbubani, Measuring the power of the Global South, Chatham House (02 2024, 20.45pm), <https://www.chathamhouse.org/publications/the-world-today/2024-02/measuring-power-global-south>

<sup>7</sup> Rod Falvey and Neil Foster, The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence, UNIDO, Strategic Research and Economics Branch, 59 (2006).

<sup>8</sup> Rod Falvey and Neil Foster, The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence, UNIDO, Strategic Research and Economics Branch, 25 (2006)

enhancing the negotiating table in its favour for accessing higher market share and percentage.

### 5. Conclusion

Thus, to conclude it is pertinent to note that though technology transfer can effectually boost the economy and market conditions of one country, it must be balanced at a moderate level so as to prevent inevitable extinction of bargaining rights of the other nations or parties. Moreover, the transfer of IP rights from one party to another also brings in certain responsibilities of adequate care and protection to avoid collusion and technology spillover. Thus, this emerging area of technology transfer of intellectual property rights has wide market implications and legal implications to modify as per the needs of the current and future setting of the parties, however care must be taken to avoid uncompetitive market practices.

