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THE ROLE OF INTELLECTUAL PROPERTY IN TECHNOLOGY TRANSFER UNDER INTERNATIONAL TRADE LAW

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Abstract

The rights pertaining to intellectual property have an important role in deciding the movement of innovations and knowledge across nations. Technology transfer is treated as a means of closing the gap between the rich and poor countries by international trade law through cooperation, investment, and access to cutting-edge inventions. The introduction of the TRIPS Agreement was intended to scale the benefits of technology up as a result of the incentives given to innovation but, in reality, this balance still proves to be a tough task. Harsh patent law, the power imbalance between the negotiating parties, and the complicated licensing systems frequently confine the less developed countries to non-accessibility to critical technologies. Academics like Maskus, Falvey, and UNIDO researchers argue that stronger intellectual property rights (IPR) protection may attract foreign direct investments and licensing in developed nations with advanced technologies but the overall advantage for developing countries would be very limited unless the domestic and international supportive policies are applied. The Doha Declaration on TRIPS reiterated the adaptability of TRIPS in dealing with public interest matters and granting of compulsory licenses.To ensure the proper and fair transfer of technology, it is necessary for the countries to vigorously utilize the TRIPS flexibilities, improve the local absorptive capacity by means of education and research, and also cultivate the voluntary mechanisms such as patent pools and joint ventures.Legal reforms can be enhanced by practical solutions through cooperation models and open innovation made possible by international organizations such as WIPO, WTO and UNIDO.The challenge of finding an equitable distribution of IP rights and public rights can

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be sorted out by using the international legal instruments that are in line with national innovation strategies and global development aspirations. Moreover, if the transfer of technology is regulated by the principles of fairness, flexibility, and cooperation, then the IP can be transformed from a barrier into a bridge for global sustainable development and progress.

Keywords: Technology transfer, Global innovation, Licensing, Policies.

Introduction

Intellectual property is the major factor in determining the flow of knowledge and innovation across border. The international trade law regards technology transfer as cross-country collaboration, investment, and access to new inventions making the gap between the developed and the developing countries smaller.Once an innovation is developed, its non-rival character implies that its advantages will be maximized if everyone can utilize it for free at a marginal cost.[2]The TRIPS, for instance, was one of the agreements designed to give inventors protections but at the same time promote the uncoupling of technology.As a result, technology is typically a useful company asset that offers the owner a competitive edge in the marketplace. Only when the advantages outweigh the hazards would a business transfer such assets.[3]The real scenario is vastly preventing technology transfer by intricate patent regulations and unequal power during negotiations.Getting a grip of this interplay rightly is the essential condition for the fair and sustainable global innovation.In the short term, this accessibility will benefit everyone, but it will also seriously undermine the motivation for additional innovation.This matter additionally brings to light the global governance effectiveness issue, particularly with regard to the fairness of technology access issue. Quite a number of developing nations still have a hard time getting the most out of cutting-edge research and innovation due to the fact that licensing agreements and patent controls are heavily weighted in favor of the richer nations and the multinational companies. Moreover, the discussion is steadily increasing on whether the existing IP standards are indeed

[2] Rod Falvey, Neil Foster & Olga Memedovic, *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence* (U.N. Indus. Dev. Org., Working Paper, 2006), https://www.unido.org/resources/publications.

[3] It is true that certain organizations, like contract research organizations, develop technology to transfer for financial gain, while other organizations, like universities, develop and retain technology as a result of other purposes. This article concentrates on the former since a large portion of the valuable technology is held as assets rather than shares in trade.

accommodating enough for the public interest and flexibility considerations. Quite the opposite, partnership building between the public sector, private sector, and international organizations is already underlined as a priority. Governments need to create more favorable conditions for open innovation, skilled human resources, and stronger domestic IP policies to be able to shift technology transfer into genuine economic and social development. However, excessive IPR protection is likely to result in insufficient new knowledge distribution, which could impede growth to the point where access to current technology is required to spur additional innovation.[4]Intellectual property's contribution to technology transfer and the extent to which it has been able to serve the mankind's collective development is the real test of the IP's role. In this scenario, the innovation would be a lot more globally distributed, and the global community would be the sole winner, not only some powerful economies.

Statement of Problem

Although international treaties such as TRIPS have been set up with the intention of promoting the transfer of technology, the actual movement of innovation from the developed to the developing nations is still very restricted. In most cases, strong intellectual property rights protection helps the rights holders who are located in the advanced economies, but at the same time, it limits the access of the developing nations to the critical technologies. This unfavourable position creates a bottleneck for the growth of the industry, the development of local innovation, and the participation of the poorer countries in international trade on an equal basis. The predicament is how to protect IP rights and at the same time push technology transfer which is a means to achieve inclusive and sustainable economic development.

Research Objective

- The goal of the research is to investigate the link between the international trade law intellectual property protection and technology transfer.
- The second aim of the study is to assess the effects of the TRIPS rules on the access and use of cutting-edge technologies by developing countries.
- The third objective is to pinpoint those factors that are preventing the transfer of technology in the present IP regime.

[4] Rod Falvey, Neil Foster & Olga Memedovic, *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence* (U.N. Indus. Dev. Org., Working Paper, 2006), https://www.unido.org/resources/publications.

- The final aim is to suggest some policy changes that would lead to a more equitable and development-oriented practice in the area of IP and technology transfer.

Hypothesis

Stronger intellectual property protection in international trade law does not necessarily mean effective technology transfer; such transfer, by its very nature, can be successful only if accompanied by legally balanced frameworks and supportive measures that take into account the developmental needs of less industrialized countries.

Research Questions

1. Does the international intellectual property right system, and mainly the TRIPS Agreement, have a major impact on the technology transfer process from developed to developing countries?
2. What kinds of legal and policy measures would encourage the transfer of technology, while at the same time making a reasonable balance between the protection of intellectual property and the rights of the public?

Research Methodology

The methodology adopted for this paper is the doctrinal research methodology. The main focus was on the analytics of the legal framework, principles, statutes and judicial decisions with respect to the Role of IP in Technology Transfer under International Trade Law and its positive and adverse effects upon the international community rights, also to try to bring out an unambiguous approach of balancing IP rights between the developed and the developing countries. This method is primarily theoretical and literature based, with the main objective is to interpret the laws, its efficient application and suggestions for maximizing efficiency.

Obligations and Aims under the TRIPs Legal Framework

The Agreement on Trade Related Aspects of Intellectual Property Rights established the global minimum standard for the national intellectual property laws and connected IP rights to the international trade system. TRIPS dissertation states IP rights protection as a factor in the globalized transfer of technology, both necessarily and in a manner which is socially and economically beneficial. Alongside, TRIPS has also set up the ultimate minimum

requirements for patents, copyrights, and other types of protection, as well as laid down enforcement duties that can play a significant role in determining how freely technology transfers from one country to another.The Doha Declaration on TRIPS and Public Health along with the following WTO work streams acknowledged that members noted potential clashes between public policy objectives and strict intellectual property rights laws and that TRIPS provides for the exercise of options to keep the policy space for the members who wish to access the technology and the basic needs.[5]Two aspects of the regulatory setup are the most important ones for the transfer of technology. To begin with, TRIPS intends to bring about such a level of protection that the rights holders regard the worldwide legal environment as predictable which, in theory, leads to foreign direct investment, licensing, and cross border collaborations being more attractive. Besides that, TRIPS acknowledges development-oriented goals and grants flexibilities that can be exploited by developing countries to acquire technology or to impose compulsory licensing in exceptional cases. This balance between the two objectives is the main topic in the discussion about TRIPS being a promoter or a blocker of technology transfer.[6]

Technology Transfer Mechanisms which affect IP regimes

Stronger IP protection can change the flow of technology from the developed world to the developing world in three major ways, both legally and economically. Initially, IP protection of a higher grade can generate considerably more but less risky returns for the holders of the rights through different technology transfer methods such as licensing, foreign direct investment and collaborative research. In the case of the technology-intensive firms, they might opt to license their technology to companies in countries where they are sure about the protection of their rights. Alternatively, they might choose to invest by establishing entirely owned subsidiaries in those countries when the legal protection is very strong.Even though the connection isn't strong throughout, studies have nonetheless pointed out the correlations between the better IP systems and greater amounts of licensing, patent applications, and

[5]United Nations Conference on Trade and Development, *Resource Book on TRIPS and Development* (2005), available at https://digitallibrary.un.org/record/556860.

[6]Keith E. Maskus, *Encouraging International Technology Transfer: UNCTAD-ICTSD Project on Intellectual Property Rights and Sustainable Development, Issue Paper No. 7* (May 2004), http://www.files.ethz.ch/isn/111411/2010_01_encouraging-international-technology-transfer.pdf.

certain kinds of foreign direct investments in particular situations.[7]Secondly, better IP protection can prevent the low-cost imitation and reverse engineering which have helped the local companies in developing countries to learn through copying. In those economies where domestic firms depended on imitation as the main learning strategy, the tightening of IP rules might slow down the building of local capabilities initially. Gradually, though, the possibility of legal licensing and joint ventures might take over imitation as the only way, if local firms possess absorptive capacity and negotiation power. Research evidence indicates that the effect of stronger IP is different according to the level of development and the domestic capabilities.A lot of the cutting-edge technology is in the hands of big international companies and they also dictate licensing conditions, cross-licensing and the provision of essential materials. Thus, the strong IP can bolster inequalities unless there are also policies to empower local players in terms of skills, negotiations, and competition. Mere possession of the legal right does not govern the flows of technology. The presence of supportive policies in education, infrastructure, and regulatory regimes will have a great influence on the results.

Implications from Empirical Literatures

The impact of intellectual property on technology transfer is shown to depend on a country's situation, the specific industry scenario, and the mode of transfer being considered in some of the most important studies by economists and international organizations. On one hand, there are those who claim that stronger IP protection will lead to an increase in FDI and licensing which in turn will contribute to technology transfer, however, the evidence is not straightforward and depends on the circumstances in the host country.The policies of the host country regarding education, market accessibility, and the quality of institutions determine if IP protection will be a factor in the inflow of technology or just an increase in the costs of technology access.TRIPS, in its very nature, was aimed at providing certain conditions that, albeit calculable, would still promote transfers of technology, however, the net advantages differ among states.A few scholars argue that the establishment of more robust intellectual property rights (IPR) systems might lead to a gradual increase in the flow of technology to the middle and high-income developing nations with moderate skills. The case of low-income and least developed countries remains ambiguous in terms of the short-term impact. If the

[7]Lei Yang & Keith E. Maskus, *Intellectual Property Rights, Technology Transfer and Exports in Developing Countries*, 90 J. Dev. Econ. 231 (2009).

nation is unable to take in the licensed technology or to have the terms of the license negotiated in its favour, the impact can be negative.The task UNIDO had marked for itself is to translate legal protection into real technology absorption and economic wealth with a view to perpetuating effectiveness in its capacity-building efforts.

Micro empirical research allows for a deeper analysis. A study that looked at patent filings and trade flows made a strong argument for the positive relationship between patents and IP protection and the import of technology-intensive goods and licensing inward in countries that are above a certain income and capability threshold.On the other hand, studies that concentrate on industries where imitation was the historical way of industrialization show slow short-run diffusion when IP regimes are made stricter. An outstanding econometric study arrives at the conclusion that the IP strength-growth relationship is not linear and is influenced by the initial income levels.At long last, the studies done on pharmaceuticals, seeds, and agricultural inputs reveal the interaction between IP and public policy. The Doha Declaration and following WTO actions were driven by the issue that stringent patent laws would prevent the access to the medicines that save lives.One of the major outcomes of the Doha agreement was the reaffirmation of the rights of members to utilize the flexibilities provided in the TRIPS Agreement and also to resort to compulsory licensing during public health emergencies, thus indicating that international law acknowledges the existence of limits when access of the public and public welfare is involved. The mentioned illustrations demonstrate that the specific characteristics of the sector involved and the public interest exceptions can tilt the scale either way as far as IP is concerned in the context of technology transfer.

The Concerns of Developing Countries, Persisting Barriers and Criticisms

There are, nonetheless, theoretical pathways that could tie the strong IP to the extensive flow of technology, but the critics campaign against TRIPS as a whole and claim that it actually has a turned back up to some areas of its service. In academic and governmental writings, some major criticisms come up repeatedly. According to the critics, one of the foremost criticisms levelled against the TRIPS agreement is that it simply provided a minimum level of protection which, in a way, was dictated by the necessities of countries that export advanced technologies.Launched into the regime of TRIPS, the developing countries were under heavy pressure and barely able to negotiate.

Detractors argue that TRIPS standards for intellectual property, among others, were raised before the recipient countries could provide the infrastructure and humans with the necessary educational background to make good use of the new standards. The coalitions and civil society in the developing nations have issued reports and policy briefs that point to the worry that the terms governing licensing and patent control are largely advantageous to the firms of the advanced economies.[8]The border measures and enforcement obligations can pose significant challenges to accessing. Trade of the necessary components and inputs for local companies to either innovate or assemble can be delayed or even stopped because of customs enforcement of infringing goods and followed through strict enforcement procedures. In some instances, such things ashigh licensing fees or restrictive licensing clauses may also contribute to the poor accessibility of the technologies due to the aforementioned administrative friction.The dreams that have been woven around technology transfer in TRIPS are often greater than the provision provided by the area.Articles 7 and 66.2 mention technology transfer and incentives for firms in developed nations to pass on technology to the least developed trade countries. However, taking the previous empirical studies into consideration, these provisions have not yet led to wide-scale and systematic transfers. In a WTO survey of the least developed countries, it was reported that the implementation of Article 66.2 had been very limited and that the incentives for developed countries were still pretty weak unless there were active policies and institutional support to back up their transfer.[9]The human resource limitations in the recipient countries are the major obstacle to the technology transfer process. Local companies, even when they have access to the required licenses or partnerships, may not have the availability of skilled people, the necessary infrastructure, strong regulatory frameworks or funds to implement and modify the transferred technologies. A lot of writers point out that the legal reform must go along with government investment in education, research institutions and industrial policy if the technology transfer is to be of any significance at all.

The way ahead: Actions and Policies

[8]Carlos M. Correa, *Innovation and the Global Expansion of Intellectual Property Rights: Unfulfilled Promises*, Research Paper No. 70 (Aug. 2016), South Centre, https://www.southcentre.int/wp-content/uploads/2016/08/RP70_Innovation-and-IP-Unfulfilled-Promises_EN-1.pdf

[9]United Nations Conference on Trade and Development, *Resource Book on TRIPS and Development* (2005), U.N. Doc., available at https://digitallibrary.un.org/record/556860

The scholarly writings unanimously point towards a conditional policy conclusion. The imposition of stronger IP protection can lead to the transfer of certain technologies in countries that already have an average technological capability and good institutional quality. For the countries that lack such capabilities, stronger IP protection might not be enough to bring about the desired transfer and might even hinder local learning if no complementary measures are taken. Thus, the policy choices are divided into three interdependent categories.The use of TRIPS flexibilities and WTO mechanisms is up to countries. Compulsory licensing, research exceptions and the LDC transition periods should be used where applicable.The Doha Declaration and the subsequent WTO guidance are still very significant legal instruments for public interest applications and for the maintenance of policy space.Meanwhile, Article 66.2 can be the basis for developed countries to launch specific incentive programs and collaboration schemes to support the least developed countries.[10]The principal step to enhance the domestic absorptive capacity is to invest in education, technical training, research institutions, and venture financing. Besides, the domestic laws that should allow technology to flow through and, at the same time, compete with the newcomers, to give the locals support in innovation, and set up licensing schemes will determine if the new technology coming in will be a sustainable development catalyst. Legal protection has to be accompanied by domestic policy to make it happen. UNIDO is in full agreement in this regard.The aim is to create public and private partnerships with flair and appropriate licensing models. The use of open innovation paradigms, joint ventures, tiered pricing and voluntary licensing will allow the accessibility of new knowledge and technology without losing the induced creativity. It is possible that the unholy of governmental institutions, development banks and other international bodies will enable the transfer of technology in the form of research and development works along with the provision of infrastructure and skilled personnel. Academic experts are of the opinion that multilateral initiatives concentrating on the dissemination of foundational science and technology through channels like market-driven transfers could be complementary to the latter.To sum up, the global IP system and TRIPS are important for technology transfer but they are not a universal solution nor the main restriction in all instances. The legislation determines what is beneficial and what is not but the results are influenced by the political situation, available skills and practices agreed

[10]Jayashree Watal & Leticia Caminero, *Least-Developed Countries, Transfer of Technology and the TRIPS Agreement*, Staff Working Paper ERSD-2018-01 (Feb. 22, 2018), World Trade Org., Economic Research & Statistics Div., https://www.wto.org/english/res_e/reser_e/ersd201801_e.pdf.

upon through negotiation. Empirical studies point to a situation of conditionally benefitted countries, where those with adequate capability get the full benefits while others receive just a trickle.In order for developing nations to enjoy continuous advantages from technology transfer, it is essential that law reform is accompanied by a combination of active industrial policies, capacity building, and international cooperation, which initially was to protect through laws but later extended to addressing the actual practical barriers that hinder the moving over and the successful utilization of technology.Legal alterations are needed; however, they are not enough. From the market-oriented and cooperative models, we can get quicker and more sustainable transfer as compared to litigation or forced measures.Drivers, barriers or control of the technology leads to one clear wind: the implementation and administration of the law of the land, possibly resulting in the standardization of the content to use, replication, beyond the judiciary.Cases illustrate how with the help of training and quality assurance, non-exclusive licensing and technology pools can quickly swell both the production and local capabilities.

The C TAP from WHO during the Covid era and the Medicines Patent Pool are the case studies of how the voluntary pooling and sublicensing can harness the expertise and build the manufacturing capability in the low- and middle-income countries.In the same way, patent pools and the establishment of standards through pooled licenses bring down transaction costs in situations where difficult technologies need several supporting patents.By providing tax rebates, co financing for partnerships, priority regulatory scrutiny for items created under tech transfer pacts, or governmental buying preferences for items produced through authorized domestic manufacturing, governments and global organizations can stimulate voluntary agreements. These incentives not only keep the reward system for innovators intact but also make it accessible to a larger group and enhance the skills of the locals.

The absorption of new technologies backed by domestic policies

The proof indicates that intellectual property (IP) reform on its own hardly ever results in the adoption of new technologies. The domestic capacity is the largest multiplier.This implies placing money into the third level of education, professional and technical training, research organizations, and innovation supportive infrastructure, which would allow the companies receiving the technology to absorb it. The policies that really count are the ones providing selective R&D grants available for collaborating with an international partner, incubators as

well as tech transfer offices located in universities, backing of the standards and quality control systems, and provision of cheap funds for up-scaling.The competition policy is a factor and is also a component: antitrust regulators should watch out for licensing arrangements that are too strict, for instance, naked exclusivity that stops the production of goods at the lower end of the market or unreasonable limits in terms of geography. Furthermore, the governments can promote the spreading of technology through public-private partnerships where the state partners in the financing of pilot plants, gives testing areas for new technologies, or takes the risk in the early stage that the private company will share the knowledge.Ultimately, the aforementioned transparency mechanisms comprising license registries and licensing agreement templates that depict best practices, not only lower the costs in transactions but also stop the imposition of unfair terms. Such domestic actions are changing the situation of legal rights from just being on paper to being practically usable for the purpose of creativity and manufacturing.[11]To strike a balance between the IP protections and the public interest, a policy package would have to incorporate: (a) judicial and legislative measures that protect rights but simultaneously contain very clearly defined, narrow public interest exceptions, and compulsory licensing that is quick in emergencies; (b) proactive application of TRIPS flexibilities and promotion of concrete Article 66.2 programmes supported with funds and technical assistance; (c) establishment of tools and provision of rewards for voluntary licensing, patent pooling, and collaborative research; and (d) continuous funding for building up the absorptive capacity and reforming the regulations in order to ensure the successful transfer.Moreover, it is advisable that governments will make transfer clauses in publicly financed research and development contracts as a condition or a reason for incentive so that public money leads to spillovers which are of public interest. Multilateral organizations can play a role through financial support for capacity building, setting up matchmaking platforms, and providing standard licensing templates and training for contract negotiation so that recipient countries do not have to accept one-sided agreements.

It is necessary to adjust the measures according to the capabilities of the countries and the different sectors. In the case of pharmaceuticals and vaccines, they might require initially

[11] World Intellectual Property Organization, *Incentives in Technology Transfer: A Guide to Encourage, Recognize and Reward Researchers and Professionals*, WIPO Publication No. 2002EN (Geneva, 2002), https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2002-en-incentives-in-technology-transfer.pdf

patent access and then tacit know-how and the proper training for setting up the manufacturing, thus making the voluntary transfer and technical cooperation really important. Digital and software technologies might be less complicated to share via open licensing and code collaboration, but they will still have the problems of data flows and standards to be solved.High capital sectors such as semiconductors necessitate long-range industrial planning, public investments in fabs, and cluster policies to create supply chains that are the strongest; the area where IP rights are safeguarded needs technology partnership models and large-scale public-private projects. Low-income countries may find their immediate priorities to be simple absorptive policies, whereas middle-income countries would be able to negotiate more sophisticated licensing and joint venture arrangements.The timing is very important: putting together the capacity building and IP liberalization alongside or ahead of the latter may reduce the risk of stronger protection simply bringing in higher prices without any productive benefits.To sum up, the legal provisions laid out in TRIPS present a significant frame but they alone do not assure transfer. The most successful policies are the ones that very cleverly bring together the above-mentioned elements, including careful national law making that takes full advantage of TRIPS flexibilities, provision of incentives and establishment of platforms for both voluntary and pooled licensing, plus substantial domestic funding for absorptive capacity.The technology flows that are practically a result of the legal openings are made possible by the power of one with the other through multilateral support and negotiation practices that are very clear. Consequently, it is a matter of concerted effort via the international legal instruments, domestic law, market incentives, and capacity building to make the technology transfer fair as well as sustainable at the same time.

Suggestions

1. Governments should try to implement and perfectly document the mechanisms by taking TRIPS flexibilities to their advantage. First, clear domestic regulations for compulsory licensing, research exceptions, and expedited government use should be established by the authorities in order to make the processes predictable and fast when public needs arise. Second, the Article 66.2 reporting should be utilized to the fullest and the developed partners should be asked for concrete incentive programs instead of simply rhetorical commitments.

2. Establish permanent technology transfer units in the ministries and public research institutions that will facilitate the signing of contracts, oversee the movement of agreements and knowledge and do all the necessary things to make the know-how of the parties flow. Provide them with the necessary resources such as model licensing templates and training that is based on WIPO toolkits so that the negotiations are not one-sided and unfair contracts do not take place.
3. Promoting fair incentives paves way to voluntary licensing. Provide tax credits, fast track regulatory review, or public procurement preference to companies that will engage in non-exclusive licensing, patent pool participation or sublicensing which also involves capacity building.
4. It is still a good time to enhance the investment in absorptive capacity.Along with every significant technology transfer agreement, provide accompanied training, standards and quality programs, and also Research and Development grants that are specifically aimed at, and money for scaling up.The proposals from UNIDO show the support actions, which are really converting the legal access for the industrial use.
5. Employ multilateral and regional matchmaking platforms as a means to decrease unfair advantage in negotiations. Solicit support from the public and private financial institutions for the establishing of pilot lines and tech demo centers so that the private sector will pass on their implicit knowledge. Monitor and make public all the technology transfer proposals and agreements to improve the openness and the teaching process.

Conclusion

The rules on intellectual property are significant, but they only represent one factor in the technology transfer equation. TRIPS not only outlines expectations but also provides states with various options to use. However, the proof is that changing the law alone will not result in the widespread use of new technologies. The main aspects are the application of the law, the establishment of incentives for voluntary sharing, and the strong capability of the receiving end to absorb the technology.The WTO guidelines and the Doha declaration have laid down a legal structure that facilitates public benefit applications and also for the Article 66.2 programs; however, the implementation of the provision is still dependent on the specific incentive programs of the developed country partners and the

proactive formulation of policies in the local market.The pandemic provides practical instances pointing out the done alternatives. The WHO C TAP platform together with the Medicines Patent Pool alliances show that patent licensing which is voluntary, transparent, and non-exclusive along with technical support can quickly increase production and disseminate know-how without hindering the innovation incentives. Patent pools and standard licensing platforms facilitate the transaction costs for complicated technologies, and they are of great assistance in situations where numerous complementary patents are concerned.On the one hand, legal measures are necessary, while on the other, public investment is the most effective approach. The licensing of new technologies and the establishment of a strong policy framework will only happen when there are sufficient resources devoted to training, research institutions, testing facilities and industrial pilots. The competition authorities' task is to track the licensing conditions in such a way that no local manufacturers are suffocated by practices that lead to their exclusion. Bringing together different players such as UNIDO, WIPO and development banks in a multi-lateral collaboration can and should be done to finance matchmaking, model contracts, and capacity building so that weaker countries are not left alone to negotiate.The TRIPS space should be cleverly utilized, and the push for voluntary sharing incentives along with the building of domestic capability must be the strategy. This combination will protect the rewards of the creators but at the same time will make technology a true engine of inclusive growth rather than a privilege that is traded.