

## **International Policy on Protection of Exclusive Rights to Transferred Technology: International Legal Dimension**

<sup>1</sup>Irina Victorovna Shugurova and <sup>2</sup>Mark Vladimirovich Shugurov

<sup>1</sup>Department of Civil and Private International Law,

<sup>2</sup>Department of Philosophy, Saratov State Law Academy, Volskaya Street 1, Saratov, Russia

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**Abstract:** The study is devoted to the analysis of international legal foundations of modern international cooperation in the field of protection of intellectual property rights, especially exclusive rights to proprietary internationally transferred technologies. Researchers give proof of notion of the complex politics of international law concerning technology transfer and protection of intellectual property rights. There is outlined the system of actors of given politics. There is carrying out the analysis of core problems of protection of proprietary technologies at the level of international law. Study offers allocation some logically and substantially connected stages of development of international policy in area of technology transfer and protection of IPRs. Much attention is paid to the possible directions of solution of contradictions between goals of international technology transfer and intellectual property right on basis of international legal instruments. Researchers conclude that potential of technologies may be realized in the global scale only in case of effective regulation of transfer of different technologies, especially high technology and observance its fundamental principles such as justice, equality, mutual advantage and reasonable terms.

**Key words:** International technology transfer, intellectual property, international policy, developing countries, international law

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### **INTRODUCTION**

The attention of contemporary world society to international technology transfer is caused by that technologies are the deciding factor for economic and social development. They are the tools for solution of different problems at the regional and global level. Based on dynamic globalization of the R&D sphere, the significance of international technology transfer is increasing. By that the exchange and diffusion of technologies, innovation and knowledge is occurring around the world through international technology transfer. That is why the providing of access to technology, especially for developing and Least Developed Countries (LDCs) is paramount item of the Global Agenda. List of more important technologies comprises now the technologies for sustainable forest management and using of forests, ICTs, technology for water treatment and waste management, clear and renewable energy technology, biotechnology, marine technology, nanotechnology.

At that the process of international technology transfer, being separate subject matter of the Global

Agenda of international cooperation, it also is as one of the major concerns of international policy in the area of development of Intellectual Property Rights (IPRs), namely protection of exclusive rights to proprietary transferred technologies and their protection. Internationally transferred technologies, acting as the critical factor of sustainable rate of economic growth and development in whole are very sensitive to implications of the protection of exclusive rights that provide the economic interests of rights holders. Concurrently, exclusive rights are the basis for monopoly of rights holders to the results of intellectual activity, for example technology, protected by intellectual property law.

At once, that may indicate that international policy of protection of exclusive rights and international policy of technology transfer are under intersecting. As the result, complex international policy of IPRs protection and of international transfer is in existence. Issues of protection of IPRs and their enforcement in the process of international technology transfer influence all countries anyway involved in flows of internationally transferred technologies.

Obviously, addressed policy has international legal dimension that is its legal basis evolving permanently. Contemporary international law provides this policy the valid framework that gives rise to the creation of all necessary conditions for the rule of law in regarded area of international cooperation. In essence, there is also the complex politics of international law in area of protection of exclusive rights and of technology transfer.

#### **MATERIALS AND METHODS**

The given study is largely based on significant overall methodological approach emphasizing the dual role of protection of IPRs/exclusive rights in process of technology transfer. That is because the patent licensing agreements, playing in many cases important role can call access to technology in question. However, positive effect of patent protection of technologies on international technology transfer and respectively generating of innovation, demands that relevant jurisdiction as developed system of IP law at the national and the international levels must exist. It goes without saying the enforcement and use of exclusive rights should promote technology as global goods to be basis for overall prosperity.

The contemporary international policy of IP and international technology transfer is consistent with that the international technology transfer goes beyond a purely economic approach. In other words, conception of knowledge and technology as public goods lays down in foundation of the modern political approach to international technology transfer (Maskus and Reichman, 2004). Therefore, we would want to underscore that the technologies, being the global public goods of intellectual nature, make for forming an appropriate conditions necessary for realization of human right belonging to different generations. Hence, core challenge for the policy of international cooperation is to set up and maintain the effective access to technological information and knowledge and to devise the special mechanisms for deploying it effectively within economy and other sectors of society. It is true for all range of countries, since the right to development in conjunction with right to access to technology is universal. In addition, the right to access to technologies is understood now as one of elements of the right to development.

Likewise, our study is based on the analysis of provisions of relevant international instruments and takes into account various findings of scientific and expert works on regarded subject matter. Insofar we are interested in examine the impact of exclusive rights as one of elements of IPRs on international technology transfer, the notion 'IPRs' means in our study notion 'exclusive rights'.

#### **RESULTS AND DISCUSSION**

##### **The nature and actors of global policy in the area of protection of internationally transferred technology:**

Modern international technology cooperation departs from the concept of technology transfer considering the particular role of exclusive rights, especially exclusive patent rights and trade secrets and in certain degree, the copyright addressing the ICTs and software in kind of necessary aspect of technology transfer.

In opinion of researchers, the interrelation between the international system of IP protection, establishing of which has become as a result of formation of international IP policy and the international system of technology transfer is one of very actual issues of international legal regulation of technology transfer in the age of globalization. Analyzed policy should be defined as a complex of international initiatives in direction to disclosing of all aspects of interrelation between system of IPRs protection and international system of technology transfer. Given interconnection is not shaping spontaneously but it is the result of conjugation of international IPRs policy and global policy in field of technology transfer. This conjugation is materially as unity of cooperation and struggle between developed and developing countries that are interested in technology transfer but having at times, different concerns in this sphere.

The analyzed policy of IPRs protection and of technology transfer is coupled with global policy of encouragement of international technology transfer. This sets a principle horizon of viewing the character and perspectives of impact of IPRs on international technology transfer, especially to developing and least-developed countries. Over the years, the international politics in field of encouragement of transfer of technology to developing countries has arisen and it continues to evolve now. It is a part of world policy on international technology transfer and it is connected with policy in sphere of aiding to development.

Certainly, overall statement of technology gap, on the one hand and recognizing the right of development countries to access to technologies, on the other hand have demanded the generation of numerous political steps at the national and international levels as response on such problem. The encouragement of technology transfer to developing countries has been permanently recurrent issue at different international economic forums, forums on aiding to development and at the level of international organizations. Policy of transfer encouragement, beside the above-stressed is closely connected with broader treatment of proprietary technological knowledge through intellectual property legislation.

Due to involvement of great number of state and non-state actors the discussions on impact of IPRs on international technology transfer the international technology transfer and policy on IPRs acquires global nature. The global policy correlates with occurred globalization of technology transfer. Actors of globalized policy in sphere of technology transfer and IPRs are states and international organizations. They are forums where decisions concerning to technology transfer are making. Other actors of international policy in the sphere of technology transfer and IPRs are public and private commercial and R&D sector and individuals. It should be stressed that such broad viewing the actors range of global policy is highlighted by that the international legal obligations to promote the technology transfer is on governments of all countries, including private firms. Actors of technology Transfer and Capacity building are also multinationals (TNCs) (Araujo and Teixeira, 2014; Glass and Saggi, 2002). There are no two ways about that the private sector begins to understand itself as actors of international technology transfer for goals of development and especially, sustainable development.

**Core law problems of protection of internationally transferred technology:** Results of discussions and multilateral political initiatives are legal provisions laid down in instruments of international law. The international technology transfer is regulated by not only norms of national legislation but also norms of international law. The norms of public international law are addressed to states, international organizations, private sector, public institutes and individual. In the past five decades, provisions on technology transfer have been incorporated into various international instruments, belonging to various branches of international law. These provisions imply a different objectives and scope, different modes of implementation including the provision on financing and are at last, subject to different terms and conditions. The Multilateral Environment Agreements (MEAs), trade, cultural and marine international law deal with specific international scientific and technologic cooperation and focuses more on technology transfer as tool for capacity building in developing countries, in particular in LDCs.

It is notable that there are at least, three main categories of intersecting technology-related provisions in broad package of international instruments in area of international scientific and technologic cooperation. The first provisions deal with the capacity building and solution of great number of problems of development through information and technical interactions. The second provisions refer to financial and investment

aspects of technology transfer including obligations of developed countries. These mainly relate to developing countries and in particular, least developed countries. The third provisions include standards to protect the IPRs. The issues on observance of IPRs here are not principal and rarely mentioned. However, strong observance of IPRs is in general, necessary conditions of international scientific and technologic cooperation and connected with international economic cooperation.

In that way, transferred technologies including technology transfer for development goals may be proprietary, for example, biotechnologies. This moment is taken in consideration in pointed instruments. International instruments referring to technology transfer imply protected and unprotected technologies. Non-proprietary technology or technological knowledge, as the public good is freely used. These are free of charge. That is a feature of access to them. Proprietary technologies in essence also are accessible. Albeit their accessibility demands authorization. Moreover, other array of international instruments in the sphere of international IPRs protection has underscored moment of transfer of protected technologies. The one of key instruments regulating transfer of proprietary technologies is the TRIPS Agreement setting up the harmonized minimal standards of protection of IPRs around the world.

From angle of economy, the international technology transfer is important sector of contemporary world economy the regularities of which are regularities of technology exchange. If proprietary technologies are transferred, IPRs aspect are basic here. In essence, the transfer of proprietary technologies is transmission of exclusive rights at the national and international levels. There have arisen the global markets of IPRs in world economy. Therefore, the international system of IPRs protection and the technology markets are closely connected. As the result, technologies, being understood as inventions and other protected results of intellectual activity and purchased for goals of goods manufacturing or supporting manufacture processes are commodities. Therefore, technologies may be transferred through commercial transactions, i.e., they may be bought, leased or sold and thus have utilization and diffusion facilitated through investment, licensing or other transfer arrangements. In our opinion, the commercialization of technologies and their transferring makes the realization such goals of technologies transfer as facility to capacity building and development very vulnerable.

Moreover, given approaches are enshrined in special IPRs protection instruments that in coordinated in them standards attempt to provide the balance between rights

and obligations of the creators, on the one hand and rights and obligations of users of technologies on the other hand. Unfortunately, this balance is rather aim than reality.

Above-mentioned various multilateral agreements have been signed between countries that are at different levels of development including different levels of developing the national patent systems. Therefore, regulating of IPRs in process of technology transfer also refers to fundamental problem of perspectives of coinciding the interests of developed and developing countries. Developed countries having effective system of innovation and numerous innovators tend to set up strong IPRs protection for the world as a whole through creating appropriate standards to be implemented in national legislation. Other countries, especially developing and least developed countries have largely focused on imitation of technology innovations as a valid source of their technological development and tended to weak protection of IPRs through adoption of numerous flexibilities. Many developing countries perceive the increasing of IPRs protection as a threat of shifting benefits from domestic imitation firms to foreign innovative firms and reducing of output in domestic economy. As underlined by A. Deardoff, given increasing was not correlated with aims of encouraging domestic innovative activity (Deardorff, 1992).

Differently directed interests as regards IPRs protection may cause some troubles for technology transfer aiming at facility to development. In this case, provisions admitting needs of developing countries (Article 4.2. of Vienna Convention for the Protection of the Ozone Layer, Article 16 of Convention on Biological Diversity, Article 66.2 of TRIPs Agreement) are far from fulfilling. The aftermaths of such collision between different group countries block the manifestations of creative potential of technologies. In our opinion, that collision impedes the transfer of Environmentally Sound Technologies (ESTs) and puts off the realization of goals of sustainable development.

Protection of IPRs as an essential facet of cooperation between these two parties has significant public aftermaths related to establishing the balance between interests of possessors of exclusive rights to technologies and public interests. This balance is provided by regimes of restrictions and exceptions of exclusive rights in modern intellectual property law. This balance has direct relation to issues on world development. It has, therefore, public international aspects. The balance of interests is serious problem of world society that focus on how to harmonize the right of developing countries to access to technology in

context of the right to development, on the one hand and the IPRs that are guard of interest of possessor of rights, on the other hand. Due to figure of IP owners and protection of IPRs in whole and patent rights in particular, the access to using of technology is possible only through his authorization.

Asymmetrical relations between the technology sellers and technology buyers derive from IP regime that prevents using of protected IPRs on technology without the permission of rights owners. Consequently, IPRs pose as medium for access to technology. This medium may conduct oneself in different manner, at time acting as impediment to technology transfer. Foundation of this problem in international aspects is a problem of contradiction between interests of developing and developed countries in area of global knowledge-based economy. This is one of the problem sectors of international cooperation in the sphere of IP and technology transfer. As far as different interests are concerned, the relation between technology transfer and protection of IPRs is under discussions at the level of global policy, being the subject matter of special global policy in area of technology transfer and IP.

It is important to understand that efforts of international society to establish the international regime of technology transfer on fair and equitable terms during 50 years presume that this regime is in conjunction with IPRs issues. At the same time, IPRs and technology transfer proceed is in great tensions. This show that international regime of technology transfer remains is still in progress and far from completion. However, set of international instruments in these there is doing an attempt to decrease this implied contradiction and claiming a balance between IPRs protection and technology transfer. It may be stressed the implementation of provisions on technology transfer means not only effective financial cooperation but also cooperation on IPRs protection, namely realization coordinated approach. The latter is possible if all countries adhere to minimum standards of protection of transferred technologies.

The methodological idea of our study is that the international policy in the area of protection of IPRs and technology transfer departures from recognition of the IPRs, especially patens and trade secrets as the necessary condition of effective transfer and diffusion of technologies but no factor of their restriction. Researchers think that this paradigm articulated in various international legal instruments concluding provisions on technology transfer covers, inter alia, international instruments in sphere of IP protection and international scientific and technologic cooperation as

well as instruments of international trade law. That is demonstrated by the Agreement TRIPS and by other instruments of the WTO. Protection and enforcement of IPRs should really contribute to promotion of technological innovation, transfer and dissemination of technology, mutual advantage of producers and users of technological knowledge, social and economic welfare as well as to balance between rights and obligations.

**Most discussed issues:** IPRs are soundly under discussion within international cooperation in the technology transfer area. The fact of matter is that during last 50 years, the protection and enforcement of IPRs have the tendency to increased standards. That implicitly diverges with the logic of technology transfer. This fact has clearly been shown by discussions at the level of international organizations and experts.

The protection of IPRs relevant to transferred technologies is one of the most controversial aspects of policy in the sphere of technology transfer and its encouragement. IPRs is both integral part of international technology transfer law and major aspect of technological advancement, namely creation, adaptation, diffusion and usage of having and emerging technologies. The consideration of Intellectual Property (IP) impact on international technology transfer is an integral part of proceeding debates on impact of IPRs on development in general including economic development and growth in particular (Falvey *et al.*, 2006; Kumar, 2003). The empirical findings on different aftermaths of this impact on economic growth in developed, developing and least-developed countries are basis for understanding of impact of strengthening of protection of IPRs on perspectives of international technology transfer, especially to countries with lower middle income.

If to say briefly, there are two main approaches to encouraging the technology transfer that consider problem of protection of exclusive rights. First approach is regulatory but second is market approach. Additionally, one range of experts traditionally focus on market-mediated international technology transfer through trade, foreign direct investment, licensing and personnel movements, along with informal means through imitation, reverse engineering and spillovers. Others very justly point out the inherent shortcomings of technology market.

Different approaches are represented by positions of developing and developed countries and reflect the different positions with regard to viewing the role of IPRs for economic development. Developed countries insist on the positive effects of IPRs on economic development. In contrast, developing countries prefer to stress the

negative effect. Like collisions in global IPRs policy, there are a different at times opposed approaches of given sort of states to understanding the character of aid to world development. The maximalist position in international policy in area of IPRs expressed by some experts from developing countries is caused by economically oriented goals and weak connection of system of IPRs with international system of human rights. IPRs are viewed as an erected wall against technology transfer. As considers, the complex web of IPRs, trade and investment has vitiated an efforts of developing countries to develop the international regime of technology transfer on fair and equitable terms. While given view reflects interests of developing countries, it should not be recognized objective, insofar as IPRs in fact is not something perfectly odious.

**Stages of evolution of the international politics in area of protection of exclusive rights to internationally transferred technology:** There are enough evidences to show several stages of the international policy in sphere of IPRs protection and international technology transfer. The first stage that was in 1960s-1980s has been connected with number international initiatives undertaken until the Agreement TRIPS. At the first stage, there have been acknowledged that the notion 'IPRs' embraces the different types of intellectual property rights such as patent, copyright, trade secrets, trademarks, industrial designs and so on. All types of IPRs anyhow affect the international technology transfer understood in wide sense as flows of technologies, knowledge, skills, equipment. However, some of these IPRs, namely patent rights and rights to trade marks have most influence on technology dissemination. Patents and their affecting the technology transfer have become in kind of one of critical issues of international debates from beginning of this agenda. In 1960s, the United Nations has undertaken study of patent role for technology transfer. UNCTAD and WIPO further have continued and extended this studying in 1975. The second issue of concern was anti-competitive provisions in licensing agreements on technology transfer concerning patent licenses. It has become clear that abuses of patent monopoly impede free flow of technology.

Therefore, in 1970-1980s many developing countries have kept to policy of control over restrictive practice and rate of royalty. There should be made the conclusion that developing countries have been interested in development of system of safeguards at the national and the international level to prevent the abuse of monopoly rights. However, it did not become as a background for binding of international legal instrument in which

developing countries was interested. In spite of failure of adoption the international code on technology transfer, its draft remains as a respectable source for forming the best practice of international technology transfer.

Second stage is connected with adoption of TRIPS Agreement in 1994 as first comprehensive agreement contains the set of minimum standards covering the IPR protection in main IPRs areas. Moreover, the TRIPS is requiring the countries-members to develop appropriate mechanisms to enforce the protection of IPRs.

It seems that adoption of the TRIPS leads to increasing the market, namely trade approach to international technology transfer and departure from above-mentioned coordinated paradigm taking into account interests of developing countries. Close connection between patents, trade and technology transfer was recognized in Articles 7, 8 and 66.2 of the TRIPS. Accordingly, discussion on IPRs protection was displaced to center of global policy of technology transfer. This shift rests on that this protection is vehicle for economic development through the trade. As the result, there occurs the exchanging in world debate on technology transfer. Moreover, the TRIPS seems to invoke the setting of basic principles of balanced relations between protection and enforcement of IPRs and facilitation of technology development as well as between transfer and dissemination of technologies. Preamble of this agreement stipulates due coordination between goals of national systems of IPRs protection and goals of development and technology progress.

Provisions of preamble and Article 7 reflect the new paradigm of economic development, postulating that economic development should be estimated in terms of human development that as Dutfield and Suthersanen state, supplements in turn, economic development by incorporating social welfare considerations and sustainable development. The goals of welfare and development achieved through technology transfer, diffusion and application of technologies particularly meaningful for developing countries have been embodied in flexible mechanisms of TRIPS such as compulsory licensing, parallel import, transitional period and so on. In respect to international technology transfer depended on patent system there may be also mentioned the Article 29.1 regarding the disclosure requirement, the Articles 30 and 31 concerning the exceptions and limitations to the exclusive rights and the Article 40 with respect to control over anti-competitive practices in contractual licenses. The TRIPS assigns the legal principles in accordance with that the sovereignty and independence of developing states to adopt decisions on exploiting the flexibilities, enumerated in this agreement are respected. Flexibilities

give to developing countries the latitude to acquire technologies without paying to right-holders full reward for using of protected result of intellectual activity.

Third stage of international policy in the sphere of IPRs associated with technology transfer is connected with adoption of agreements at the bilateral level and the regional level (NAFTA, EU, ASEAN) and mainly with expansion of IPRs protection beyond the level that has been set by the TRIPS. Such agreements are numerous. It is possible to state that there arise, along with international level, the bilateral level with some inherent standards of stronger IPRs protection. Drahos (2001) has named this appearance as a new bilateralism in intellectual property. This bilateralism is in essence, the fragmentation of international IPRs regulatory regime that negatively influences technology transfer. Provisions laid down in myriad of bilateral and regional Free Trade Agreements (FTAs) stipulate the standards that known as provisions TRIPS-plus. They mean the strengthening of IPRs protection. Thus, significant changes are occurring at the international, regional and bilateral levels that is based on strengthening of the minimum TRIPS standards through progressive harmonization of policies in accordance with standards of technologically advanced countries. World faces the occurrence of the so-called TRIPS-plus era affecting IP, trade, economic development and accordingly, international technology transfer.

The testing of perspectives of impact of these agreements on technology transfer and their standards of IPRs protection is a lap of future. Nevertheless, it is logical continuation of having been made studies on correlation between the level of IP protection and technology transfer in general. It is now clear that possible influence shall be ambiguous because specificity of these agreements is that they contain provisions on IPRs that are going beyond multilaterally agreed agreements in regarded sphere and setting standards of TRIPS-plus aiming at reinforcement the position of right-holders while there is being proclaimed measures on prevention the abuse of IPRs by right-holders. The stronger IP standards will negatively influence on advance such goals of technology transfer as goals of promoting the development and capacity building.

As already stated, the broadening of extent of IPRs that has been provided by multilateral IPRs agreements including the TRIPS, means the transition from minimum standards to more strict level of IPRs protection embodying in the TRIPS-plus provision. The results of these provisions for perspectives of international technology transfer are contradictory (Shugurov, 2015). That may unpredictably affect the international transfer of technology in the context of transition to sustainable

development. In this account, politics of international law in the area of international transfer faces the new problems. Consequently, world society is interested in renewal of politics of international law in considered area as applied to the new era of development of IPRs protection on the one hand and the new era of technological advancements on the other hand.

### **CONCLUSION**

In sum, there may see a forthcoming of unprecedented situation in the international system of technology transfer closely connected not only with new phase of international scientific and technologic cooperation but also with new phase of development of world trade and investment. In order to optimize process of technology transfer a various groups of countries must undertake individual and collective actions. Actors of complex as shown, international policy in area of IPRs and technology transfer should be concerned about ensuring the realization of purported benefits from technology transfer for all countries.

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