

On Intellectual Property Protection as a Mechanism to Reduce Brain Drain.

عن حماية الملكية الفكرية كآلية للحد من هجرة الأدمغة

Imloul Rima *

Faculty of law and political science, Bejaia University
rima.imloul@univ-bejaia.dz

Date of send:12/05/2024

Date of acceptance:08/06/2024

Date of publication :30/06/2024

Abstract:

The issue of brain drain is one of the biggest challenges hindering the development process in developing countries, and it is constantly increasing in recent times with the magnitude of the losses resulting from it, especially in the issue of benefiting from the discoveries and inventions of this group, which the receiving developed countries acquire and monopolise their use and transfer to developing countries, and this monopoly is manifested in the enactment of laws related to the protection of intellectual property in these countries.

The role of developing countries in protecting intellectual property rights remains fragile, which requires reconsideration in order to search for mechanisms capable of encouraging the research and development process, thus preserving competencies and countering the phenomenon of migration while working to create the necessary conditions to attract and retrieve migrant brains.

Keywords: Intellectual property, brains, investments, migration, technology, countries, development.

*Corresponding author: Research laboratory on the effectiveness of the legal norm, Faculty of law and political science, Bejaia University

Introduction

The achievements and capabilities that humanity has reached are due to the investment of societies and countries in intellectual development, so protecting the rights resulting from this field will ensure that its owners have a motivation to think and develop while achieving economic development and scientific progress.

However, the lack of attention to this type of investment, especially in developing countries, has resulted in a significant deterioration in the wheel of local production with unbalanced investment management, poor quality of education and theft of ideas, all of which have been a major cause of brain drain in the region.

The lack of sufficient awareness that intellectual investment is a pillar of the stability of industries of all kinds, and a factor to advance economies and attract foreign investments is a real issue, so the solution lies in devoting an appropriate strategy to encourage research and development, especially in the field of pivotal industries that radically depend on study and research while monitoring and deterring violations, this is what prompts us to ask how intellectual property can play a role in stopping the brain drain?

The world is witnessing many forms and methods of violations in all fields of knowledge, including scientific, technological, economic, social, social, environmental and media, and this in turn has greatly affected minds and competencies, especially those in third world countries (I). Therefore, making a comprehensive and strategic qualitative shift and adopting reform policies covering all fields have become an imperative necessity to protect knowledge assets and thus catch up with progress (II).

Firstly : Weak intellectual property protection exacerbates the phenomenon of brain drain

Intellectual property rights play an important role in achieving the development of any society, whether developed, developing or underdeveloped, no country can do without a legal framework to protect intellectual property¹ as this is reflected in the protection of creative and knowledge products of thought, especially with the advent of current economic and technological developments, and this matter acquires greater importance in light of the new global economy that is rapidly moving towards becoming a knowledge economy based on information and intellectual products², so the need for public awareness of intellectual property laws is established, and the weaker the system for the latter in the country, the higher the incidence of intellectual property crimes in practice

1. Exacerbation of intellectual property crimes

Information is considered the main pillar of the progress of nations at various levels, and today it has become a tool in the hands of the developed world to exert

pressure on the developing world, especially in the scientific, economic and even political fields, so that these countries impose their hegemony in all areas of life.

It is no secret that information is one of the fruits of human thought, which is then transformed into a stock of knowledge from which humanity draws everything it needs to conduct the ways of life of human beings, and this service provided by human beings to each other necessitated the recognition of the enjoyment of the owners of these valuable works with their right to be attributed to their works; that is, the recognition of their intellectual property of these works, and mere recognition is not enough to fulfill their right, but must seek to protect these rights in both industrial and artistic and literary aspects³.

Developed countries have realised the advantages of intellectual property rights as they stimulate the building of the knowledge economy in the country, as they allow the exchange of expertise and knowledge in a safe environment and preserve the rights of all parties from investors and companies or trademarks, so they hastened to protect them by issuing an arsenal of legal texts to deter all violations that affect such rights, and worked to create the climate and provide appropriate conditions and conditions to attract talent from many other countries, especially developing countries.

Contrary to the situation in developed countries, intellectual property rights in developing countries have not received sufficient attention, not because of the lack of legal texts that recognise and acknowledge these rights, but rather in the application of these laws and the enforcement of these rights in favour of their owners by the competent bodies, especially the judiciary.

Various comparative legislations have recognised intellectual property laws, yet the rate of piracy and infringement of such rights is still significantly high, the main reason being the weak enforcement of these rights by the concerned agencies⁴.

However, in comparison with all technologically advanced countries, the latter have tended to introduce new provisions that criminalise counterfeiting in their old traditional laws,> and therefore these countries have drafted new legal texts capable of dealing with these new offences.

The United States of America is one of the leading countries in issuing special laws that criminalise intellectual crimes, especially cybercrime, as it enacted a special law on the protection of computer systems, and France has developed its criminal laws to comply with criminal developments by issuing the first special law that added computer crimes to the Penal Code in 1988⁵.

As for the Arab countries, they are still far from this legal development. Algeria, for example, except for the law on the protection of intellectual property, has not enacted new laws of its own in this field⁶, and the criminal judiciary has been assigned to consider cases committed against or by means of information systems.

Therefore, offences that violate intellectual property rights are still rampant, as evidenced by the following⁷:

- Commercial fraud, theft of artistic, literary and scientific works and theft of patents.
- The lack of adequate legal protection for literary property in a large number of countries, and the lack of effective means available in those countries to compensate the owner of literary property or protect him when his works are attacked.
- The existence of some restrictions on the exhibition of some literary, artistic and foreign works so as not to crowd out similar national works.

All these crimes led to the brain drain from developing countries to many developed countries, which laid the carpet for them by creating favourable conditions with the enactment of many legal texts that guarantee them protection unlike their original countries.

2. The effects of brain drain as a challenge to development

Brain drain is the biggest issue⁸ faced by developing countries due to the effects it has on these countries, especially in the field of achieving comprehensive development. It is also considered a lost opportunity for these countries because they do not benefit from their expertise, this is due to the developed (receiving) countries monopolising the intellectual production of these migrants and depriving their countries of origin of it, which has affected the scientific achievements recorded by developing countries compared to developed countries.

What exacerbates the issue is that developing countries spend exorbitant amounts of money to train and train these migrants, and in return they are deprived of the benefit of their achievements for several reasons, including the laws protecting property rights imposed on migrants in these countries, even though these laws ostensibly give the innovator or inventor the right to dispose of what he or she has produced⁹.

Therefore, the contribution of developing countries to global property systems is very weak, due to several reasons¹⁰, the most important of which is the lack of interest of these countries in the intellectual production of their citizens by providing the necessary protection for their products, which leads to their exposure to violations and thefts, and thus the innovator, creator or inventor resorts to migration to safer countries and appreciation of what he produces, which is of course available in developed countries.

In addition, the country of origin will lose the economic return that could be achieved if the migrant remains in his homeland throughout his productive life, and it will have to bring in foreign competencies to support economic activity at a great financial and social cost, in addition to that the country of origin will lose competencies of educated vanguards who believe in the issues of national development, sacrifice in work and commitment to it to push the process of progress in the mother country in order to create a better tomorrow¹¹.

It is worth noting that brain drain greatly affects the subsequent (younger) generations of competencies, especially those belonging to the most capable social

groups due to the ease of communication media for them to learn abroad, which causes more damage to the exporting country of these competencies.

In addition to the above, brain drain has many other repercussions, which are highlighted in the following:

- Weakening of identity and belonging to the country of migration.
- Weakening the scientific research institutions that produce the technologies that develop them and create knowledge.
- Widening the gap between rich and poor countries due to the rich countries' ownership of the technology and inventions developed by migrants.
- Reducing the volume of skilled labour in various fields available in the country of origin.
- Brain drain is also a factor that negatively affects the level of local scientific production and research by driving away competencies from engaging in it and leaving the field open for unqualified people to control the scientific and productive arena.
- Influenced by the cultural dependency of the societies to which the competencies migrated, which harms the cultural development in their societies, which represents a link in the path of comprehensive development¹²?

In the end, it can be said that one writer summarised this dangerous phenomenon by saying: 'It is not only blood that is bleeding in the Arab world, but we are suffering from a deeper, more dangerous and more painful bleeding, the bleeding of brains. The danger of this deadly haemorrhage is that it is carried out quietly without the noise of blood, although its effects are more severe on the future of the Arab world, and its damage affects every Arab citizen for several generations¹³'.

Secondly: The necessity of adopting comprehensive reform policies to protect intellectual property and limit brain drain

Intellectual property rights guarantee their owners the possibility of benefiting from what they have invested effort or money in their creativity, so protecting them has become an imperative necessity in order to achieve several motives, the first of which is that human progress depends on its ability to create in the fields of technology and culture, and the second motive is that legal protection of creations encourages spending additional resources in order to achieve more innovations

Third, the promotion and protection of intellectual property stimulates economic growth, creates jobs and industries, and improves the quality of life.

All these motives would help to preserve various competencies in various fields, thus making it possible to address the phenomenon of brain drain **(a)** However, the efforts of countries, especially developing ones, should not be limited to providing favourable conditions to preserve their brains, but should go beyond that to attract brain drain **(b)**.

1. Combating Crimes against Intellectual Property Rights

The protection of intellectual property is scientifically and morally necessary, but the issue at hand is that most legislations deal with the phenomenon from the end, so this issue must be reconsidered from the beginning by breaking the barrier of technological

backwardness by encouraging scientific research and activating the role of universities and research centres.

For example, crimes against copyright and neighbouring rights¹⁴ have raised a great deal of weight at the level of criminal laws, especially cybercrimes, as most laws are accustomed to legislating and accounting for crimes, while another form of crime has emerged, which is often of a moral nature and dimension, as the phenomenon of the Internet and the modern communications and information technology has turned the legal rule upside down, as it has become very difficult to identify the parties to the crime accurately, especially the party causing the crime, as the flow of viruses at the level of e-mail or cash on the digital workbook in the Internet world makes judicial and legal recourse almost impossible¹⁵.

Therefore, in order to activate the legal protection of intellectual property rights, which may help to find some possible solutions to confront all types of infringement of this intellectual right, countries, especially developing countries, must take some measures, the most important of which are:

- Issuing procedural penal texts to cope with the development in the field of information technology and clarifying the texts of seizure of ordinary and digital works.

- Providing special courses and training for judges in the field of cybercrime.

- The need for concerted international efforts to find new legislative texts and more modern technical means to confront crime in the digital world, which has become an invasion of the daily life of individuals¹⁶.

- Continuous monitoring of legislative developments in developed countries by developing their existing legislation in order to achieve flexibility and keep pace with rapid developments.

- Establishing specialised courts to settle disputes related to intellectual property.

- Participating in international seminars and conferences, spreading awareness and educating the international community about the importance of intellectual property and encouraging and supporting the spirit of creativity and innovation.

- Work to rationalise economic policies to close the gaps that give an opportunity to create the crime of counterfeiting and piracy¹⁷.

- Strengthening and developing the protection of intellectual property among developing countries, as the practical reality has proven that the state cannot, by its individual efforts, eliminate crime as a result of the tremendous developments in the field of communications and information technology, and therefore combating this can only be achieved through international cooperation that guarantees some kind of protection, hence the importance of international convention organisation by concluding international agreements to protect the elements of intellectual property¹⁸.

2. Providing a favourable climate to retain brains while attracting and repatriating them

In order to limit or reduce the brain drain in developing countries, or to transfer their expertise and discoveries to be utilised and used for the development of their countries of origin, in addition to providing adequate protection for their intellectual property, the following must be done:

❖ **Develop a system of privileges for migrant talents:**

This initiative has borne fruit in some countries that suffer from the phenomenon with a sincere will to return these talents, and it starts by allocating significant resources to invite researchers abroad to return with a full commitment to fund their research programmes or part of this funding, according to the country's capabilities.

❖ **Creating an attractive scientific and technological environment:**

The experiences of many countries have proven that when the internal situation changes for the better socially, politically, economically, scientifically and technologically, then the country will not need an incentive policy for the return of its competencies, because it will simply turn from a repulsive environment to an attractive environment for these competencies¹⁹.

❖ **Support and modernise the scientific research infrastructure:**

This is through a number of measures, the most important of which are:

- Building modern technology transfer networks that include a number of scientific and technical competencies, and that their activity is based on specific programmes in the fields of scientific and technical research.
- Respecting academic and scientific freedoms.
- Lifting restrictions on research, studies and ideas and evaluating scientific competencies fairly.
- Publish and exchange scientific and technical research with scientific institutions outside the country.
- Develop the administrative environment for scientific and academic research and provide material and moral discrimination for scientists and researchers to enable them to practice their specialisation at a decent level and a dignified life.
- Encouraging national initiatives in the field of communicating with migrant competencies to enhance their utilisation in development efforts²⁰.

❖ **Develop programmes to tap into migrant minds:**

These programmes can include the following²¹:

- Inviting these minds to give scientific lectures in their fields of specialisation, and facilitating their meeting with their colleagues in specialisation, research centres and universities in these countries.
- Invite them for technical consultations in which they are linked to important projects in their countries during the discussion of the development plan.
- Contracting them for specific periods of time within the framework of implementing specific projects.

- Translate and print their writings with fair rewards.
- Respect the human aspect of competencies, especially freedom of opinion, especially with regard to their areas of technical specialization.

Conclusion

Investment in the intellectual field is considered the finest type of investment and the capital of the present and the future, so developed countries rushed to protect the rights resulting from this field to ensure the exchange of knowledge and expertise in a safe environment, which in turn is a factor for the advancement of their economy and thus achieving progress and development in many fields, which greatly affected the competencies present in developing countries and thus the spread of the phenomenon of brain drain in search of a medium that provides better living conditions in various aspects with adequate protection for their scientific products.

The role of developing countries in protecting intellectual property rights remains weak, which has exacerbated the phenomenon of migration, which in turn has brought significant negative repercussions that have affected local production and the rate and quality of investments with the spread of scientific theft and many other violations.

Therefore, the search for an appropriate strategy to encourage the research and development process in various fields has become an imperative necessity to enable developing countries to preserve and benefit from their competencies by:

- Combating violations of intellectual property by issuing legal texts to protect these rights and updating them to be in line with the new crimes that have recently emerged in the field of information technology, as well as establishing specialised courts to settle disputes related to these crimes while encouraging the process of training judges in this field, in addition to the need for concerted international efforts to find new legislative texts and more modern technical means.
- Special privileges should be granted to competent individuals to encourage them to continue their research and giving.
- Creating a stimulating scientific and technological environment.
- In addition, it is necessary to develop programmes to benefit from migrant brains in order to avoid a rupture between them and their countries of origin.

Margins:

¹ See : - Ordinance No. 03-07 dated 19 July 2003, relating to patents, JR No. 44, issued on 23 July 2003.

Ordinance No. 03-08 dated 19 July 2003, relating to patents, JR No. 44, issued on 23 July 2003.

² Abou Tayeh Nour, 'Ethics of Knowledge and its Relationship to Brain Drain in the Arab World', cybrariansjournal, No. 24, 2010, p. 7, [available at]: <http://www.journal.cybrarians.info/index.php?>, accessed 04-10-2020.

³ Salami Esaidani, 'International Legal Legislation for the Protection of Virtual Intellectual Property Rights: A Critical Perspective from a Media-Legal Perspective', intervention delivered within the

framework of the International Forum on Learning in the Age of Digital Technology, Tripoli, Lebanon, 22-24 April 2015, pp. 1.

⁴ Zouani Nadia, *Protecting Intellectual Property from Counterfeiting and Piracy (A Comparative Study)*, Doctoral Thesis, Major: Law, Faculty of Law, Ben Youssef Ben Khedda University, Algeria, 2013, p. 534.

⁵ Zouani Nadia, *op. cit.*, p. 534.

⁶ Khenoussi Karima, 'International protection against the offences of counterfeiting and electronic piracy and the position of the Algerian legislator', *Journal of Credibility*, Vol. 3, No. 3, 2021, pp. 59-74.

⁷ Salami Esaidani, *op. cit.* p. 7.

⁸ For details on the causes and factors of brain drain, see:

- Mohamed Elhadi Kassi, 'Scientific research and the issue of brain drain in the world, a sociological analytical reading on the causes and repercussions', *Maarif Magazine*, No. 12, June 2017, pp. 12 ff.

-Darwazi Ammar, Laroussi Ahmed, 'Arab Brain Drain, Causes and Solutions', *Journal of Studies and Research*, Vol. 12, No. 4, October 2020.

⁹ Soudani Nadia and Araba Rabeh, 'The Impact of Brain Drain from Developing Countries on their Intellectual Production', *Journal of Economic Researcher*, No. 06, 2016, p. 233.

¹⁰ For details, see : Economic commission for western ASTA, "the brain drain problem: causes, consequences and remedies", third session, Qatar, May, 1976.

¹¹ Essam Mohamed Abdelmaged, *Brain Drain*, p. 04, [available at]: https://www.researchgate.net/profile/Isam_Abdel-

¹² Snoussi Cheikhaoui, *The migration of national talents and the issue of development in the Maghreb: A Case Study of Algeria (1999-2010)*, Master's thesis, Specialisation: Euro-Mediterranean Studies, Faculty of Law and Political Science, Aboubakr Belkaid University, Tlemcen, 2011, p. 107.

¹³ Al-Attar Hassan, 'The Arab Brain Drain', May 2017, p. 02, [available at]:

<http://elaph.com/Web/Opinion/2017/5/1147973.html>, accessed on 30-09-2020.

¹⁴ See Ordinance No. 03-05 of 19 July 2003, relating to copyright and neighbouring rights, JR No. 44, issued on 23 July 2003.

¹⁵ Salami Esaidani, *op. cit.* p. 10.

¹⁶ *Ibid*, pp. 10 and 11.

¹⁷ For details, see :

-Zouani Nadia, *op. cit.*, pp. 537-539.

-BASCAP and INTA, "the economic impacts of counterfeiting and piracy", *Frontier economics*, 2017, p.12.

¹⁸ Zouani Nadia, *op. cit.*, p. 526.

¹⁹ Snoussi Chikhaoui, *op. cit.* 113 and 114.

²⁰ Snoussi Sheikhawi, *op. cit.*, p. 115.

²¹ Sarhan Fathi, *The Arab Brain Drain and Investment Management*, first edition, Sharif Mas Library for Publishing and Distribution, Cairo, 2011, pp. 311-313.