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The Convergence of Industrial Property Rights

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THE CONVERGENCE OF INDUSTRIAL PROPERTY RIGHTS[*)]

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As regards the performance required for the development of the knowledge-based society, we view industrial property as an important level in this context. Therefore, in this paper we present (on a comparative basis) the system of industrial property rights and their protection in the European Union, the United States of America and Romania. At the same time, we analyse aspects of institutional, legislative and functional convergence/divergence of industrial property rights. The approach to these aspects is made on a correlative basis and deals with the interdependence of the industrial property field and the RDI field.

Key words: *institutional convergence, competitiveness, invention patent, industrial design, innovation, trademark, industrial model.*

JEL: O34, P48, K29, O57

1. Introduction

As regards the phenomena specific to globalisation, integration, as well as developments in the knowledge-based economies, the issue of convergence is focused on identifying and establishing the contribution of the factors to the closing of the gaps in development. Besides the traditional factors, an important role is played by the intangible factors, mainly represented by the knowledge stock. The specialized literature and the evolution of the economic life show that the stimulation of knowledge production and the development of knowledge markets require the protection of industrial property rights[1].

Considering the above-mentioned, we intend to make a comparative factorial, statistical and economic analysis of convergence in the industrial property protection field, mainly in the European Union, the USA and Romania.

2. The System of Intellectual Property Rights

In the context of the contemporary evolution of the global phenomena and the creation of knowledge-based economies, industrial property clearly provides significant stimuli for developing, encouraging and protecting creativeness and innovation.

[*)] A study within the CEEX Programme – Project: "Economic Convergence and the Role of Knowledge in the Context of EU Integration", No. 220/2006. The Romanian version has been published in *Studii Economice*, Institutul Național de Cercetări Economice, 2009.

[1] Aurel Iancu, *Cunoaştere şi inovare – O abordare economică*, Bucureşti, Editura Academiei Române, 2006, p. 33.

According to the specialized literature[2], the industrial property is a system consisting of the following sub-systems:

a) political will;
b) legislative framework;
c) vital institutions;
d) a culture of the intellectual property.

These interdependent systems should be present and fully functional. The luck of one or other component from the system leads to stagnation or diminution, to a business environment lacking in vitality, consistency and safety and, consequently, in creativeness and innovation.

The configuration of the intellectual property system is presented in Figure 1.

3. The Industrial Property Protection in the EU, the USA and Romania

Since creations are an inexhaustible resource of every people as well as an intellectual product, they need protection from the state. The need for protecting the rights of industrial property stem from its essence, scope and purpose: protecting the product of human intelligence and, at the same time, guaranteeing the use of this product to consumers' benefit[3]. The protection of intellectual property rights, in general, and of industrial property rights, in particular, can be ensured only by a rigorous institutional system and a coherent legislative framework at state, region and world levels.

The specialized literature reveals that institutions are included in the category of important factors that could determine the economic rise and decline of nations[4], while the latter could stimulate or block the economic-social mechanisms[5]. This determinant position results from their role in enforcing and observing a system of rules agreed for one field or other of the economic social life, without which activities would be chaotic and the business environment would be non-attractive or even contrary to progress and development.

As regards the industrial property system, the institutions that deal with related rights and by which the relationships with the society is ensured include the following: the government (intellectual property offices and other agencies, such as those dealing with taxes, relations with consumers and foreign relations), courts, research and education institutions, as well as agencies for rights consolidation[6].

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[2] Kamil Idris, *Proprietatea Intelectuală – Un instrument puternic pentru dezvoltarea economică*, Organizaţia Mondială a Proprietăţii Intelectuale.

[3] Ciprian Raul Romitan, *Protecţia penală a proprietăţii intelectuale*, Bucureşti, Editura C.H. Beck, 2006, p. 49.

[4] Aurel Iancu, *Tipurile de convergenţă; Convergenţa Instituţională*, Seria Working Papers no. 1, Bucureşti, 2007, *http://convergenţe.ince.ro*.

[5] Mancur Olson, *The Rise and Decline of Nations*, New Haven, Yale University Press, 1982.

[6] Kamil Idris, *Proprietatea Intelectuală – Un instrument puternic pentru dezvoltarea economică*, Organizaţia Mondială a Proprietăţii Intelectuale (Translation from the WIPO Publication No. 888), Bucureşti, Editura OSIM, 2006, p. 280.

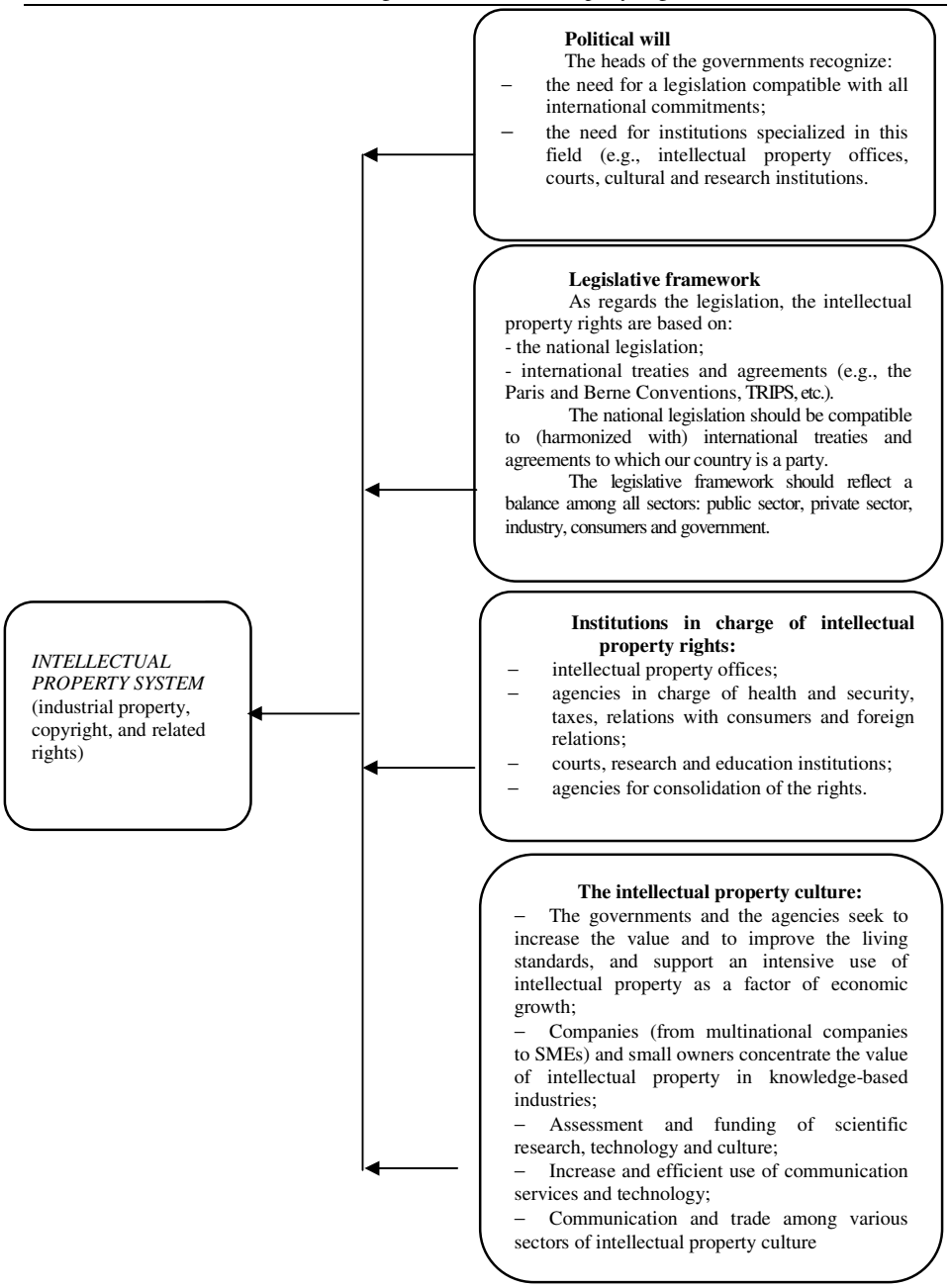

Figure 1. The Intellectual Property System.

In fulfilling their obligations, these institutions ensure and guarantee the protection of industrial property rights and, at the same time, removes possible barriers to development. These institutions should encourage creativeness and innovation by the decisions they take and implement.

Human resources constitute a very important dimension of these institutions. A system that does not properly support human resources do not function adequately.

Considering the role of the institutions within the industrial property system in relation to the World Intellectual Property Organisation and the integration of the acceding countries into the EU, we present and analyse the institutions that ensure the functioning, the convergence and the performance of industrial property systems in the European Union, the USA and Romania.

3.1. EU Regulations and Organisations

The European Union is a very complex structure: twenty-seven countries with different histories, nations, civilisations, economic and social developments, historical sympathies and antipathies, frustrations, etc.

For fully achieving a united Europe, the following are required:

a) the harmonisation of the above-mentioned, avoiding unilateral claims;
b) an economic growth for satisfying all EU members.

Of course, we mean that in our times economic growth is increasingly based on intelligence, which enhances the value of knowledge. This economic growth based on knowledge (in which industrial property deserves a special position) should ensure at least the following:

a) a long-term continuity;
b) an activity for as many as possible;
c) cooperation in the act of creation;
d) increasing social cohesion;
e) ensuring the harmony with the natural environment.

As regards the industrial property, the Community patent, trademark and industrial design meet these requirements on the European plane. All are meant to implement and protect the R&D results in conditions of fierce competition[7].

In order to administer and manage the industrial property protection in Europe, the following offices were created:

- The European Patent Office (EPO);
- The Office for Harmonisation in Internal Market (OHIM);
- The Community Office for Varieties of Plants (COVP).

[7] Until recently there were three important competitors; today there are (at least) two more competitors: China and India. Chinese products often reach the quality of the European ones, and scientific research is evolving at high rates.

In fulfilling their purpose, these institutions specialized in industrial property protection cooperate both with the other EU organisations having competence in this matter and with the national offices of the member states.

A. The European Patent Office (HPO)

For strengthening the cooperation of the European countries in investments so that the protection should be achieved by means of a single simplified procedure, i.e., granting patents and establishing certain standard rules for inventions patented in Europe, a convention was concluded[8] for setting up the European Patent Organisation, an organisation having administrative and financial autonomy.

The European Patent Office is an institution based on an intergovernmental structure autonomous in relation to the European Union, and its members – the signatory parties to the Conventions – come also from outside the EU: Switzerland, Liechtenstein, Turkey, Monaco and Iceland. The creation of this system was meant to provide a legal framework for granting European patents by means of a single harmonized procedure.

According to Article 4 of the European Patent Convention, the task of the organisation for granting European patents is fulfilled by the European Patent Office under the control of the Board of Directors. The main task of the Office is the management and granting of invention patents in Europe, thus stimulating innovation, competitiveness and economic growth to the European citizens' interest.

The EPO holds and manages, among others, the most important database of patents in the world (over 56 million of freely accessible documents)[9]. At present, the granting of patents grew at a high rate (e.g., a 45% growth in 2005 as against 2000), which needs a steady improvement of the Office's activity with regard to the effectiveness of the main preoccupations – granting European patents. At the same time, the scope of the Office's responsibilities also includes the introduction of new internal mechanisms of quality control as well as guaranteed quotas for the European innovators so that the European patents should further ensure a high level of legal security for patent users.

The patents granted by the EPO do not ensure immediate protection in all member countries of the Convention. Once granted, they become, in fact, a set of national patents, since after the expiration period reserved for claims from third parties, patent holders must submit translations of the patent description to the national offices of the countries in which the registration is expected: the national offices will register the patent on the basis of these translations. Also, the fees for keeping them in force are paid separately to each country, and the responsibility for legal procedures concerning the patent is also borne by the national courts.

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[8] The European Patent Convention is a special agreement – in accordance with Article 19 of the Convention regarding the Industrial Property Protection, signed in Paris, on 20th March 1883 and revised (last time on 14th July 1967) as well as a Regional Patent Treaty – in accordance with Article 45, paragraph 1, of the Treaty of Cooperation in Investments, concluded on 19th June 1970.

[9] Alain Pompidou, "La vision de l'OEB pour système de brevets du 21 ème siècle", IPR-Helpdesk, Buletin No. 6, 2005.

A serious shortcoming of this system is the fact that the European patent (to be valid in all countries) must be translated into each official language. Thus, the translation costs make an invention patent significantly more expensive in Europe than in the USA and Japan. This problem is also worsened by the need to operate in different national legislative systems in case of litigation.

The only centralized procedure that can be submitted to the EPO is opposition. This procedure gives the third parties the right to oppose a patent. It is a quasi judicial trial, subject to appeal, which may lead to amendments or even the cancellation of the European patent.

Although, at present, this system is the only European supra-national organisation (but not subordinate to the EU) that grants and manages patents receiving protection in several European countries, it is not sufficient for the harmonisation required by the Lisbon Strategy[10].

Since this institution does not meet the EU exigencies and criteria of harmonisation, it was necessary to provide the present system with alternatives for resolving various problems such as the judicial-administrative problem (by adopting the European Agreement on Patent Litigations) or the burdening problem of translation (by ratifying the London Protocol)[11].

Also, since the launch of the Lisbon Strategy, it has been considered to create a Community patent managed by a single institution subordinate to the European Commission; unfortunately, the debates concerning this very important project have not produced results so far.

B. The Office for Harmonisation in Internal Market (OHIM)

The reasons for creating this institution are the following[12]:

- the promotion of a harmonious development of the economic activities throughout the European Union;
- continuous and balanced enlargement, by creating and ensuring the proper functioning of an internal market able to provide conditions similar to those existing in the national market;
- the elimination of obstacles to free movement of goods and free rendering of services;
- the creation of a system able to ensure the competition observance;
- the creation of legal conditions for allowing the enterprises to adopt the manufacturing and distribution of goods and the provision of services in accordance with the EU standards;

[10] Improving the Patent System in Europe – Communication of the Commission to the European Parliament and the Council, 29th March 2007: http://ec.europa.eu/internal_market/indprop/patent/index_en.htm

[11] Victor Iancu, "Sistemul de brevetare din Uniunea Europeană în contextul economiei bazate pe cunoaştere", *Oeconomica* nr. 2, Bucuresti, 2007.

[12] EC Regulation 40/94 of 20th December regarding the Community Trademark.

- the creation of legal instruments for enterprises to meet this purpose, i.e., trademarks that allow them to identify products and services on an equal basis throughout the European Union, irrespective of borders;
- the creation of a Community system of characteristics that gives the enterprises a right to acquire, according to a single procedure, Community characteristics, in order to enjoy a uniform protection and to have effect throughout the European Union;
- the need to create a trademark governed by a single Community law, which should be directly enforced in all member states, thus allowing the enterprises do unrestricted business within the Common Market.

Therefore, the responsibility to promote and manage trademarks, designs and models throughout the European Union is borne by the Office for Harmonisation in Internal Market. According to the regulation concerning the Community trademark, the Office exercises, among others, the following responsibilities:

- carries out the registration of Community industrial property titles;
- keeps the public register of titles;
- participates, beside the jurisdiction of the EU countries, in making decisions on applications for the invalidation of these titles after their registration.

The Office for Harmonisation in Internal Market is a public institution with legal personality. The activity of this organisation is governed by the Community law. The control over the legality of the decision taken by the Office for Harmonisation in Internal Market is based on the Community jurisprudence: the Court of First Instance and the EC Court of Justice.

The Office achieves the balance of its budget by its own collections, especially by fees on the registration or the renewal of the protection titles.

The Community trademark and design are essential for the Single Market, as they are valid throughout the EU; the first applications for the registration of Community trademarks were submitted in 1996, and for designs, in 2003. The OHIM is one for the successful stories of the European Union and an example of engine institution of institutional and legislative harmonisation.

The latest annual reports show a careful reforming activity, consisting in changes in its mode of operation and development of its relations with the applicants for the registration of trademarks, designs and industrial models, with users and with national offices of the EU member states. One of these changes consists in the diminution in fees on the Community trademark applications and renewals[13]. One of the reasons for taking this measures is the fact that, after 1994, over 200,000 enterprises from the whole world applied to the Office for receiving legal protection for their trademarks throughout the European Union.

[13] J.O. 2271/14, 15.10.2005, Réglement (CE) No.1687/2005 de la Commission du 14 octobre 2005 modifiant le réglement (CE) no. 2869/95 relatif aux taxes à payer à l'Office de l'harmonisation dans le marche intérieur (marques dessins et modèles) ce qui concerne l'adaptation de certaines taxes.

The reform of this institution includes also the successful implementation of programmes for the improvement of productivity and effectiveness by simplifying the procedures, optimizing the working methods, eliminating the bureaucracy, achieving a strict financial management, cooperating with authorities responsible for the industrial property protection in member states and reaching a high level of information technology in order to provide high quality services, thus attracting an increasing number of users of e-business, e-filing and B2B (Business-to-Business).

C. **The Community Office for Varieties of Plants (COVP)**

In accordance with the Community legislation, a system was set up for the protection of the rights concerning the varieties of plants, as a specific form for recognizing and protecting the property rights on varieties of plants, which are valid in the European Union between 25 to 30 years. This office has used this scheme since 1995.

6.3.2. The Industrial Property Protection in the USA

The USA are a member of the World Intellectual Property Organisation and a signatory party to the Paris Convention about Intellectual Property Protection, the Universal Copyright Convention, the Buenos Aires Copyright Convention and the Patent Cooperation Treaty.

In general, the regional and bilateral agreements signed by the USA include also provisions on industrial property protection.

Among these agreements we find the following:

- NAFTA (North American Free Trade Agreement) is a trilateral agreement between the USA, Canada and Mexico. The purpose of this agreement is the regionalisation of the free-trade group in the Northern Hemisphere of the American Continent and a counterbalancing action against the forces of the European market, on the one hand, and of the markets of Japan and the Pacific countries, on the other hand. Practically, the provisions of this agreement refer to six fields: access to markets, rules concerning the origin, trade regulations, trade in services, investments, rules for industrial property protection, settlement of disputes;
- The USA-Chile Free Trade Agreement stipulates that the exchanges between the two countries include also the copyright protection and the IT trademark protection, the liberalisation of the governmental actions and the regulation transparency;
- The USA-EU Transatlantic Economic Partnership, by which the USA and the EU launched a trade expansion. This initiative covers over 12 fields (agriculture, manufactured goods, services, industrial tariffs, global electronic commerce, investment, public procurement, competition, etc.) among which the intellectual property rights occupy a high position;

- The USA-Singapore Free Trade Agreement stipulates the elimination of taxes especially on the trade in electronic and IT&C products, and includes direct provisions concerning the industrial property rights.

- **The protection of investments by patents**

The USA patents give the inventor an exclusive right to produce, use and sell inventions and patents and legally protects him against unauthorized use of his inventions by third parties.

To be patented, an invention or a technology should meet the following requirements: to be new, original and useful. At the same time, the applicant for the patent should be the inventor himself.

The Federal Government controls the patent rights, which are granted for 20 years.

Since the protection of this right begins after granting the patent, the invention is not protected during the approval period.

A patent is granted following an application submitted to the Patent and Trademark Commissioner. Usually, the design and the description of the product manufacturing in English are requested.

It should be noted that, usually, in the USA there are no limitations of the royalities requested by the patent holder for the patent use and licensing, but the user must pay a fee, which is deducted from the payments made by the inventor.

- **Trademark protection**

In the USA, like in other countries, trademarks are defined as words, symbols or signs adopted by producers or traders in order to identify their goods and distinguish between them. Trademark names themselves identify certain producers or dealers.

The following types of trademark are protected by law in the USA:

- for goods: product trademarks;
- for services: service trademark;
- for certifying goods and services: certification trademarks;
- for identifying the group it belongs to: collective trademarks.

The trademark provides the owner with an exclusive right to use names, symbols, schemes or combinations thereof for products or services for 20 years.

For the registration of a trademark, the applicant must submit a written application, including a design of the trademark or symbol, to the Patent and Trademark Commissioner.

If the applicant is a non-resident, he should empower a local lawyer or other person residing in the USA for taking action on his behalf.

After registration, within a certain period, the trademark holder should issue a declaration to confirm that the trademark is in use or explain – giving strong reason – why it is not used.

At the expiration of the 20-year term, the trademark registration can be extended for other twenty years, observing the same procedures.

- **Design and model protection**

In the USA, designs and models are grouped under the common name of design and may receive two kinds of protection:

- by so-called design patents;
- by copyright.

The first law concerning the design patent was enforced in 1842 to clarify the problems of that time with regard to the copyright law and the law of classical patents. The design patent was meant to protect the form of presentation and the image of a product rather than its functional characteristics. Such patents are granted for a wide range of products, including shoes, hats, furniture, glassware, etc.

Thus, the American law offers an opportunity to receive an industrial patent, if the following requirements are met:

- *to be able to materialize* – in other words, the patentable design should be included in or applied to a tangible object created by man;
- *to be new* – the novelty of an industrial design is proven if no previous creation shows the same features; also, a design is considered new if an ordinary observer, while viewing the new design as a whole, thinks that it is different and not a modification of an existing one;
- *not to be obvious* – the new design cannot be protected if a person specialized in the field to which the design belongs perceives its characteristics as obvious;
- *to be ornamental* – to meet this requirement, the industrial design should be a product of an aesthetic creation or an artistic conception; also, the design must provide a global picture that should not be dictated by its material function;
- *to be original* – originality implies an exclusion from protection of any imitation of already known creations.

The period of protection granted by patent is 14 years from the time of granting. Design patents enjoy the presumption of validity and the proof in case that their validity is questioned should be provided by the contestant.

As regards the design protection by copyright, there are two requirements as follows:

- *originality* – it means that the author should have used a minimum of creativeness or should not have copied another creation;

- *expression in a tangible form* – so that the design achieved by the author should be stable enough to allow for its perception, reproduction or communication for a longer period than a transitory one.

The design protection by copyright concerns graphic or sculptural creations to which industrial designs can be attached. They could be graphic creations, photographs, prints, reproductions, maps, diagrams, technical models or designs, including architectural drawings.

But it is worth mentioning that technology licensing in the USA is an attractive way followed by foreign companies to enter this market. Therefore, for licensing the use of a technology, companies are not obliged to make capital investments or maintain permanent employees. At the same time, by licensing a viable alternative is possible when goods cannot be imported because of their large size, volume or tariff and non-tariff barriers.

Also, it is worth mentioning that the patent or trademark licensing, as it is in use in the USA, ensures the non-residents' legal protection for certain periods of time.

3.3. Regulations and Institutions Concerning the Industrial Property Rights in Romania

Once the Romanian economy became part of the market economy and the European Single Market, one objective of the Romanian legislator with regard to the industrial property was the harmonisation and incorporation of a new legislative system, in compliance with provisions included in international treaties and agreements in the field, as well as those included in bilateral or multilateral agreements signed by Romania.

The Romanian legislation concerning the industrial property is a modern one and at present it ensures the protection of all categories of rights recognized inside the EU and, to a great extent, in the world.

A. As regards the invention patents, the Law 64/1991 governs in this field in Romania. This law underwent several modifications and republications imposed both by modernisation needs or by the ratification of certain international agreements/treaties (e.g., Romania's adherence to the European Patent Convention in 2002). As regards the inventions, we have the Law 350/2007, which stipulates for the first time the protection of utility models.

To get a better picture of Romania's position in relation to international regulations/agreements on the protection of inventions, we mention the following:

- The Paris Convention on industrial property protection, revised in Stockholm on 14th July 1967, ratified by Romania through the Decree 1777 of 28th December 1968;
- The Strasbourg Arrangement concerning the international classification of invention patents, concluded on 26th March 1971, signed by Romania in 1998;
- The European Patent Convention, adopted in Munich on 5th October 1973 and the Revision Act, adopted in Munich, on 29th November 2000, to which Romania adhered by the Law 611/2002;
- The Marrakech Agreement on the establishment of the World Trade Organisation – Annex 1C. The Agreement on aspects of the intellectual property rights concerning the trade, concluded at Marrakech, on 15th April 1994, ratified by Romania on 22nd December 1994;
- The Patent Cooperation Treaty, adopted at the Diplomats' Conference, in Washington, on 19th June 1970, ratified by Romania in 1979.

The State Invention and Trademark Office (SITO) is a specialized institution of the central public administration subordinate to the Government, having sole authority for the invention protection in Romania. Among its responsibilities we find the following: i) it registers, publishes and analyses the applications for invention patents for granting and issuing an invention patent; ii) it is the keeper of the National Register of Invention Patent Applications and the National Register of Invention Patents in which data on patent applications and patents are recorded .

Considering the international aspect of its activity, the ISTO has the following responsibilities with regard to treaties/agreements to which Romania is a party: i) it receives invention patent applications internationally registered by Romanian applicants, in accordance with the Patent Cooperation Treaty; ii) it manages, preserves and develops through international exchanges the national collection of invention descriptions and creates the database in the invention field on any information support; iii) it maintains relations with similar governmental and intergovernmental organisations and specialized international organisations to which Romania is a party.

B. In Romania, the trademark protection is governed by the Law 84/1998 on trademarks and geographic indications; this law was modified in 2005. As regards the international regulations, Romania ratified the most important treaties/agreements in this field such as:

- The Madrid Arrangement on the international trademark registration, in the form revised in Stockholm, on 14th July 1967, ratified by Romania in 1968;

- The Protocol of the Madrid Arrangement on the international trademark registration, adopted in Madrid, on 27th June 1989, ratified by Romania in 1998;
- The Nice Arrangement on the international classification of products and services for the trademark registration, concluded on 15th June 1957, revised in Stockholm, on 14th July 1967, and Geneva, on 13th May 1997, and modified on 2nd October 1979, to which Romania adhered in 1998;
- The Vienna Arrangement on the international classification of figurative elements of the trademarks, concluded in Vienna, on 12th June 1973, and modified on 1st October 1985, to which Romania adhered in 1998.

As an institution that "manages" this domain, the SITO is, by law, the specialized institution of the central public administration and the sole authority for the trademark protection in Romania. Among the responsibilities of the SITO we find the following: i) it registers, examines and publishes the applications for the trademark registration; ii) it issues trademark registration certificates; iii) it organizes and keeps the National Trademark Register; iv) it manages, preserves and develops the national collection of trademarks and geographic indications and creates a database in this field, etc.

As an institution playing an active role and ensuring international contacts in accordance with the agreements and treaties signed by Romania, the SITO: i) examines the trademarks registered or submitted for registration with the World Intellectual Property Organisation in accordance with the Madrid Arrangement or the Protocol regarding the Arrangement, recognizing or rejecting the trademark protection in Romania; ii) maintains relations with similar governmental institutions or regional industrial property organisations and represents Romania in international specialized institutions; iii) receives and re-submits to the OHIM national applications for Community trademarks and makes documentary investigations in its own database, at the OHIM's request, for checking the "availability" of certain trademarks for their registrations as Community trademarks in accordance with the applications received from EU member countries.

C. The models and designs are governed in Romania by the Law 129/1992 concerning the protection of designs and models, which underwent the last modifications in December 2007. As regards the legislative convergence, the last modifications are important because they help to enforce the provisions of Regulation No. 6/2002/EC concerning the Community designs and models, which ensure their protection in Romania. According to the new provisions, the Community protection of a model/design can be received after the direct submission of an application to the Office for Harmonisation in Internal Market or to the SITO.

Also in this field, Romania is a party to important international agreements/treaties such as:

- The Hague Arrangement on the international storage of designs and models, concluded on 6th November 1925, with later modifications and additions, to which Romania adhered in 1992;
- Law 15/2001 for the ratification of the Geneva Document and the Hague Arrangement for the international registration of designs and models, adopted in 2001;
- The Locarno Arrangement on the classification of industrial designs and models, signed on 8th October 1968 and revised on 28th September 1979, to which Romania adhered in 1998.

As in the case of trademarks, the SITO is an institution subordinate to the Government having sole authority in Romania that ensures the protection of designs and models. Among the main responsibilities we find the following: i) it ensures protection by issuing the registration certificate of designs and models; ii) it is the keeper of the Register of Applications and the Register of Designs and Models; iii) it makes, on request, documentary investigations concerning the published designs and models and provide mediation services.

Considering its active role, assumed through agreements/treaties to which Romania is a party, the SITO: i) maintains relations with similar governmental organisations or specialized international organisations; ii) receives and analyses international applications made in accordance with the Hague Arrangement; iii) informs the European Commission about the national regulations adopted for transposing the Directive 98/71/EC.

As regards the Community designs and models (enjoying protection in Romania), the SITO is an intermediary institution that receives applications for national designs and models and re-submits them to the OHIM for examination in order to be registered as Community designs and models.

The complex role of the SITO in the national protection of industrial property rights is clearly shown by the above presentation. Nevertheless, the challenges specific to the new technical and economic revolution require urgent international cooperation in this field as well as international harmonisation of the required laws and procedures.

Closely linked to the above-mentioned is the problem of combating counterfeiting, piracy and, in general, acts that violate industrial property rights. Although it is an institution playing a very active role in combating the above-mentioned phenomena, the SITO's means of action are still limited, as the leading role is played by institutions having coercive power (the police, the prosecutor's office, courts, etc.) and the activity, the procedures and the programmes of these institutions should be consistent with those of similar institutions in the EU, first of all, and of institutions having responsibilities in this field on the international level.

Table 1 presents synthetically – on a comparative basis – some essential elements of the systems for the industrial property protection in the USA, the EU and Romania.

Table 1

The content of the IPR protection systems in the USA, the EU and Romania

	Patent	Industrial models and designs	Trademarks
USA	• The American legislation establishes three types of patents: (i) utility patents, (ii) design patents; (iii) plant patents. • Patents are granted by the US Patent and Trademark Office (USPTO). • The area of protection granted by patent is very wide, since it also includes "inventions" in software and business. • The USA are member of the Patent Cooperation Treaty (PCT) under the aegis of the World Intellectual Property Organisation (WIPO).	• The institution of the industrial model/design is not independent, since these IP components *are protected by patent* (design patent). • The difference between a utility patent and a design patent consists in the fact that the former protects the manner of using an article and how it functions, while a design patent protects only the external aspect. • Since no institution of the industrial design is established, the USA cannot be part of the system created by the Hague Arrangement on the international storage of designs and models.	• The trademark is protected and, similarly to the patent, is an independent institution. • A trademark is registered by means of an application submitted to the USPTO, which also manages the registered trademarks. • The USA are a member of the Madrid Agreement and the Madrid Protocol on the international registration of trademarks (in 2006 the USA registered 3,296 international trademarks).
EU (Europe)	• The EU has not its own patent system (but there is a project for that). In Europe, patents are granted by the European Patent Office (an independent institution of the EU, created by the European Patent Convention, but to which all EU member countries are affiliated. • The European Patent protection area is much more restricted than its American counterpart (e.g., in Europe, the *software* * or *business methods* are not patentable). • Since the European Patent System does not imply a common jurisdiction and there is a problem caused by the patent translation into the language of each member country of the Convention where protection is sought, it is less dynamic than the American equivalent, and the patenting costs are much higher.	• The industrial design institution was harmonized by creating the Office for Harmonisation in Internal Market (OHIM), which manages the Community design. • The creation of the institution of the Community design was a beneficial measure for receiving a unitary protection throughout the EU by means of a single application submitted to the Office. • In August 2007, the EU submitted the instruments of accession to the Hague System. Thus, by means of a single application, European companies can receive protection not only in the EU, but also in all members countries of the Hague Arrangement (the Geneva Act).	• In the EU, a Community Trademark system was created and it is managed by the OHIM. By this system, any EU member state may request the registration of a trademark throughout the EU, in order to receive protection in the entire Community. • In 2004, the OHIM became e member of the Madrid Protocol, which facilitated the international registration of an "EU trademark"; thus, the Community protection could change into international protection through the OHIM.

Table 1 (continued)

România	• Patents are granted by the State Invention and Trademark Office (SITO), in accordance with Law 64/1991on invention patents. • The SITO is a national organisation subordinate to the Government, which manages the national patenting and, at the same time, is a partner of the other specialized national offices or specialized international organisations to which Romania is a party. • Romania became a member of the European Patent Convention in 2003 and of the Patent Cooperation Treaty in 1979.	• The institution that provides protection to models and designs is the SITO, in accordance with Law 129/1992. • Romania, as an EU member, enforces the provision of EC Regulation No. 6/2002 concerning the Community industrial designs and models, and the SITO functions as a contact institution or an intermediary organisation. • Romania became a member of the Hague Arrangement on the international storage of designs and models in 1992.	• The SITO is the institution that grants the trademark right in Romania. • Romania, as an EU member, enforces the provisions of EC Regulation No. 40/94 of 20th December 1993 on the Community trademark, and the SITO functions as a contact institution or on intermediary organisation. • Romania is a member of the Madrid Agreement and the Madrid Protocol on the registration of international trademarks.

* But the software is protected by copyright.

Source: Based on USA, EU and Romanian regulations in this field.

4. The Convergence of Regulations and Institutions with Regard to the Protection of Industrial Property Rights in the EU, the USA and Romania

In this section, we make an analysis of various aspects of the convergence applied to the industrial property field, as well as an assessment of the contribution of the industrial property, as an intangible factor, to development in order to close the economic gap between countries.

4.1. Ways for Achieving the Industrial Property Protection and Types of Convergence

Officially established through the Paris Convention on industrial property protection (signed on 20th March 1883, revised and modified several times), the industrial property represents certain rights, gained by law, on man's technical creations.

The industrial property protection is achieved as follows:

- by legislative and institutional means for gaining industrial property rights;
- by means of protection of these rights, including the fight against anticompetition practices.

By these means, knowledge changes from public goods into private goods or, more exactly, the knowledge producer (natural or legal person) receives legal recognition as owner of this intellectual creation for the entire period of protection through the protection title granted by the public authority[14].

Thus, the property right provides the owner of these goods (intellectual creations) with an important gaining potential, which is a strong incentive for innovation and stimulates investment in research, offering, at the same time, opportunities for recovering the investment and other expenditures on research, development and innovation[15].

Depending on aspects specific to the category that forms the object of the industrial property (invention, industrial model, brand, trademark or service brand, etc.), the materialisation as juridical instruments, which ensure protection and confirm the property right, can be achieved in three ways:

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[14] Aurel Iancu, *Cunoaştere şi inovare – o abordare economică*, Bucureşti, Editura Academiei Române, 2006.

[15] Paul M. Romer, "Endogenous Technological Change", *The Journal of Political Economy*.

- national – companies and natural persons may request protection for an invention, trademark, design or model, etc. through national offices of intellectual property;
- regional – when protection is requested in a group of countries, which are parties to regional agreements, through regional offices of industrial property (e.g., the Office for Harmonisation in Internal Market, the European Patent Office, etc.);
- international – when protection is requested through institutions of the World Intellectual Property Organisation in accordance with the required procedures.

Both at present and in the future, the role of industrial property rights is quite important in making companies or corporations viable and in ensuring their performance. For example, in the USA, the tangible assets amounted, in 1982, to about 62% of all assets of the corporations, while by 2000 their share diminished to about 30%, which shows an increasing share of intangible assets. In Europe, in early 1990's, the intangible assets were estimated to be over one-third of all assets (e.g., in 1992, in the Netherlands, the intangible assets represented about 35% of all public and private investments). Also, a British study reveals that, on the average, 40% of the value of a company do not occur in the trade balance[16]. Another study, conducted on 284 Japanese companies in 1993, shows that industrial property assets amounted to 45.2% of all accumulated corporate assets[17].

It is obvious that, more and more, companies administer and make use of their powers granted through industrial property rights (patents, trademarks, industrial designs, logos, etc.) not only as protection against intellectual theft, but also as an active and strong tool of market support (competitiveness, sectoral influence, reputation, etc.).

Besides the relations for market support and business regulation[18] (especially in the USA and Europe), the industrial property rights and their protection are in a direct relation and have a certain impact on foreign investments and on developing countries, aiming at a positive and mutually advantageous relation.

Recognizing the role of intellectual property (in general) and of industrial property (in particular) in economic growth for bringing closer the development levels of real economies as well as the processes related to the fulfilment of the requirements for the accession to the European Union, the question is what types of convergence are applied to knowledge production and protection?

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[16] Kamil Idriş, *op. cit.*

[17] Gordon V. Smith; Russell L. Parr, *Valuation of Intellectual Property and Intangible Assets*, second edition, New York; John Wiley &Sons, 1994.

[18] See USA policies and EC policies for patents and parallel imports.

Considering the coherent system of general convergence[19] and referring to industrial property protection we distinguish between the following types of convergence:

- ***institutional convergence,*** which, in the industrial property field, is aimed at making compatible the institutional system structure and the legislative system reform in different countries or within an organisational framework at world level (World Intellectual Property Organisation), at regional level (Office for Harmonisation in Internal Market, European Patent Office, including the Community Patent Project, etc.), at developing it in order to ensure an efficient operation of the system and an adequate communication among countries and regions, for achieving the protection of the knowledge production property – an important factor of economic and social development;
- ***functional (operational) convergence*** in relation to the evolution of industrial property protection, determined by the application of the specific legislative system, using several indicators such as: the number of patent applications and issues, the number of applications for Community trademarks, the number of applications for designs and models, and the intensity indicators (number of applications for patents from residents per one million people, number of applications for patents from residents per one billion dollars of GDP, number of applications for patents per one billion dollars for expenditures on R&D), etc.

In the next section we present aspects of the convergence applied to industrial property protection, using indicators specific to each type of convergence for each category of industrial property rights and, consequently, estimating the trend and degree of convergence/divergence.

4.2. Institutional, Legislative and Functional Convergence of Industrial Property

Knowledge markets are imperfect markets. Among the solutions considered for improving the operation of these markets we find the regulation of new knowledge and new ideas in order to ensure legal protection for industrial property rights for a given period.

[19] Aurel Iancu, "Tipurile de convergenţă; Convergenţa Instituţiilor", Working Papers Series, No. 1, Bucureşti, 2007.

It is obvious that protection implies, on the one hand, the creation of a temporary monopoly over the utilisation of knowledge, ideas, etc. and, on the other hand, ensure the raising of monopoly rents in order to recover the cost of R&D and, of course, to earn a profit.

The connection between industrial property rights and society is achieved by institutions (organisations) responsible for initiating, establishing, enforcing and protecting these rights on national, regional or world level.

On national level, the institutional system of industrial property includes intellectual property offices and other governmental agencies, courts of law, research and education institutions as well as rights consolidation agencies.[20].

Being interested in defining, analysing and enforcing formal and informal rules and agreements, these institutions converge and help to create behavioural models for individuals and other economic and social actors functioning on the market or in society, whose transactions imply, among others, categories pertaining to the industrial property field.

As the market is based on regulations, rules and agreements with regard to the companies' transactions, so institutions (organisations), as management structures, are based on rules and agreements.

Douglas North says that institutions are no longer required in a world having an accentuated instrumental rationality[21].

However, the same author considers that institutions are an expression of the following:

a) Formal governing, judicial rules and laws of contracts, property rights, etc.;
b) Informal rules, complementary to the formal ones: agreements, codes of conduct, rules of behaviour, customs, routine, traditions, including the level of confidence;
c) Effective enforcement of these rules at governmental level, at NGO level, etc. for implementing and monitoring the game and the enforcement of the established rules[22].

"The rules of the game", as they were presented above, are also applicable to the concrete field of industrial property rights.

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[20] Kamil Idriş, *op. cit.*

[21] Douglas North, "Institutions and Credible Commitment", *Journal of Institutional and Theoretical Economics (JITE),* 149/1, 1993.

[22] Douglas North*, Institutions, Institutional Changes and Economic Performance*, Cambridge University Press, 1990 Douglas North, *"*Prologue", in John Brodak and John V.C. Nye (eds), *The Frontiers of the New Institutional Economics*, San Diego, California Academy Press.

It is obvious that the creation, organisation and functioning of the institutions require certain costs. However, as regards the knowledge producers and owners, the existence of institutions and of a specific and coherent legislative framework for ensuring the protection of industrial property are absolutely necessary, especially when we consider the evolution of the phenomena from a regional or global perspective.

Therefore, the question we put forward refers to institutional, legislative and functional convergence in the industrial property field between the national system, within the international and regional systems of industrial property protection .

The economic literature[23] refers to the synthetical indicator of institutional development or the development of the institutional capital (or their components) and to its connection with the development level (GDP per capita). The specialized institutions, as well as other public institutions having responsibilities in industrial property protection are important components of the institutional capital of a country. Therefore, we may say that the specific indicators worked out and computed by organisations having international vocation include also the institutional state specific to industrial property regulation.

To these indicators we can add specific indicators of industrial property such as: number of applications for patents, trademarks, designs and models, etc. per one million people or 1 million euros (or dollars).

The large number of countries that signed the Convention on the Establishment of the World Intellectual Property Organisation, the 1883 Paris Convention on industrial property protection (and later modifications), TRIPS, EU Directives on industrial property, etc. makes us believe that, at least institutionally and juridically, they represent actions for achieving convergence between developed countries and less develop countries.

Analysing statistical data on patenting in EU member countries, the USA, Japan, China and the Republic of Korea (Table 2), we find significant differences between the USA and developed EU countries. However, the convergence regarding the patenting and the global competitiveness (the innovation pillar) is quite obvious.

[23] Aurel Iancu, *op. cit.*; Daniel Kaufman, Aart Kraay and Pablo Zaido-Lobaton, "Governance Matters", World Bank Development Research Group, *Macroeconomics and Growth*, Policy Research Working Paper, 2196, oct. 1999.

Table 2

A comparative table of the patenting intensity indicators in EU member countries, EPO, the USA, China, Japan, the Republic of Korea and the global competitiveness indicator of innovation, (2004)

Country/Group of countries	**No. of applications from residents per 1 million people**	**No. of applications from residents per 1 billion US dollars of GDP**	**No. of applications from residents per 1 million US dollars spent on R&D**	**Innovation (the 9th pillar of global competitiveness)**	
				Place	**Score**
1. EU member countries:					
Austria (AT)	240.42	8.10	0.42	17	4.65
Belgium (BE)	51.82	1.81	0.08	16	4.68
Bulgaria (BG)	33.89	4.56	0.91	87	2.93
Cyprus (CY)	10.90	0.52	0.18	53	3.30
Czech R. (CZ)	60.98	3.42	0.27	28	3.98
Germany (DE)	587.13	22.57	0.90	5	5.51
Denmark (DK)	347.30	11.84	0.45	10	5.04
Estonia (EE)	20.01	1.50	0.18	30	3.83
Spain (ES)	67.25	2.92	0.26	35	3.68
Finland (FI)	384.65	13.97	0.40	4	5.56
France (FR)	235.67	8.75	0.40	14	4.80
United Kingdom (GB)	320.34	11.31	0.60	12	4.89
Greece (GR)	44.05	2.16	0.26	47	3.43
Hungary (HU)	74.01	4.79	0.51	31	3.82
Ireland (IE)	193.45	5.42	0.52	20	4.54
Italy (IT)	109.43	4.23	0.37	43	3.50
Lithuania (LT)	20.37	1.69	0.25	66	3.19
Luxembourg (LU)	44.12	0.69	0.03	23	4.36
Latvia (LV)	46.70	4.36	1.14	50	3.35
Malta (MT)	……..	……..	……..	62	3.26
Netherlands (NL)	-	-	-	11	4.90
Poland (PL)	62.36	5.23	0.93	44	3.47
Portugal (PT)	11.71	0.65	0.07	32	3.81
Romania (RO)	43.21	5.54	1.38	68	3.14
Sweden (SE)	307.83	11.34	0.28	6	5.44
Slovenia (SI)	163.75	8.51	0.55	34	3.71
Slovakia (SK)	39.94	2.97	0.51	42	3.51
2. The European Patent Office	56.82	……	……	-	……
3. USA	645.44	17.70	0.68	2	5.72
4.China	50.75	9.37	0.71	46	3.44
5. Japan	2.883.56	107.26	3.41	1	5.91
6. Republic of Korea	2.188.96	116.19	4.40	15	4.71

*Source***:** WIPO Report regarding the Intellectual Property on Patents, 2006 – Statistics on Patenting and World Economic Forum, Report on Global Competitiveness (2006).

Analysing these indicators, we find out that there are significant gaps in all indicators between the USA and EU countries, except for Germany and, partially, Denmark, Finland, the United Kingdom and Sweden. Therefore, we should note that the number of applications submitted to the European Patent Office is very small, if compared to those submitted to the specialized offices of the USA and Japan. In Table 3 we also see Romania's modest ranking in the EU and in the world by all indicators.

Table 3

A synoptic table of the patenting intensity indicators in EU countries, the USA and Romania

Explications		**No. of applications from residents per 1 million people**	**No. of applications from residents per 1 billion dollars of GDP**	**No. of applications per 1 million dollars spent on R&D**	**Global competitiveness**	
					The 9th pillar (innovation)	
					Place	**Score**
1. European Union	The first 9 countries	163.75 – 587.13	8.51 – 22.57	0.28 – 0.90	4 – 34	3,71 – 5,56
	The other 18 countries	11.71 – 109.43	0.52 – 5.54	0.03 – 1.38	16 – 87	2,93 – 4,68
2. USA		645,44	17.70	0.68	2	5.72
3. Romania		43,21	5.54	1.38	68	3.14

Source: Own processing based on statistical data from the WIPO Report on Patents, 2006, and World Economic Forum, Report on Global Competitiveness (2006).

As regards Japan, which is the first in this field, is ahead of the USA in all respects and of the other countries, except for the Republic of Korea.

This is mostly explained by the fact that, in July 2003, Japan started a Strategic Programme for Intellectual Property, containing about 270 proposals for legislative and institutional reform. Here are some of them: radical measures for speeding up the examination of patent applications, for creating the High Court of Intellectual Property or for intensifying the fight against counterfeiting and piracy.

The Japanese strategy regarding the industrial property is based on a principle according to which strategical exploitation is the only means (for a country lacking natural resources) to maintain its place in the world economy and to intensify competitiveness. The Japanese plan for promoting industrial property includes activities in five priority fields: the creation of industrial property; the protection of industrial property; the trading of industrial property; the promotion of the creative content, in particular, audiovisual works; the valuation of human resources[24].

[24] M. Arai Hisamitsu, "Sus les projecteurs: Comment le Japon a formulé une stratégie nationale de la propriété intellectuelle", *Actualités & Evénements*, Organisation Mondiale de la Propriété Intellectuelle, juin 2007.

However, statistical data rank Romania within the group of EU member countries achieving low levels of both the patenting intensity indicators and the global competitiveness indicators. The gaps between Romania and developed countries (both EU countries and the USA) are obvious. For example: between 13.59-3.79 to 1 as against the developed EU member countries and 14.94 to 1 as against the USA for the indicator referring to the number of applications from residents per one million people or between 1.77–1.18 to 1 as against the developed EU member countries and 1.81 to 1 as against the USA for the global competitiveness indicator.

As regards the legislation concerning the protection of industrial property rights, we may say that, at present, Romania has a regulation framework harmonized, for the most part, with European and international regulations in this area (see Section 3.3 above).

In relation to institutional convergence, we could consider the SITO as a central pillar in the industrial property field from a twofold perspective: (i) an institution responsible, in general, for the national protection of industrial property; (ii) an organisation playing an active role in the relation with specialized institutions from other countries and international organisations.

As regards the second perspective, it is an institution that is part of international systems/organisations specialized in protecting all industrial property elements (WIPO) or some components, such as invention patents (EPO), trademarks or designs and models (OHIM). Even if the national specialized office is structurally subordinated to the Romania Government, the SITO – being an active member of the above-mentioned organisations – becomes part of a continuously developing homogeneous network, which plays a leading role in promoting the industrial property culture and protection and unitary regulations and procedures in member countries. Since it is part of these specialized international structures, the policies, the decisions, the procedures, etc. discussed and approved at this level have a better chance to be more intensely propagated on national level, thus providing a proper framework for institutional and functional harmonisation.

Of course, a certain degree of "originality" of a specialized national office can actually help to satisfy local technical-economic, juridical and cultural requirements and characteristics. This aspect cannot be considered an obstacle to institutional convergence and functional convergence as long as diverging elements are only playing a circumstantial role and do not decisively interfere, as a disturbing element, in the harmonisation process.

5. Conclusions

With regard to the recent evolution of industrial property rights, we notice that institutional and legislative systems undoubtedly tend towards convergence in accordance with international treaties and agreements. But there is full freedom for adjusting national systems to the needs of each country. As regards the content of industrial property rights (as reflected by the evolution of statistical

indicators), a clustering takes place among various groups of countries in relation to their level of economic and social development. This reveals the polarisation and the existence of wide gaps between countries or groups of countries, which often become wider because of the rush for resources and profit.

Therefore, we conclude that achieving convergence requires at least three essential elements, as follows:

1. Formal compliance of the national legislation with EU and international legislations;
2. Applicative compliance of the national legislation and institutions with the EU and international ones;
3. Monitoring and directing the institutions having responsibilities in the field of industrial property rights for achieving real economic convergence.

Given the interdependence between the industrial property field and the RDI field, the similarities and divergences confirmed within a system are undoubtedly found in the other system as well. Therefore, the convergence concerning the industrial property rights and their protection follows the same way like the convergence taking place in the RDI system.

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