A COMPARATIVE ANALYSIS OF PATENT LAWS OF THE DPR KOREA AND RUSSIAN FEDERATION

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Abstract *In the present era of knowledge-based economy, the role played by patent and patented products or technology in economic exchange and cooperation between states are continuously expanding, which accordingly requires the improvement and perfection of relevant legal climate. In this light, states enter into multilateral or bilateral treaties regarding patent and its protection, and enact national patent laws to suit to their national circumstances. As member states of the WIPO and the states parties to patent-related multilateral treaties, including the Paris Convention for the Protection of Industrial Property and the Patent Cooperation Treaty, the DPR Korea and Russia has enacted and been enforcing patent-related national laws to suit to the specific environment and situation of the countries. Comparing national patent laws of the DPR Korea and Russia is of substantial significance in promoting the understanding of the legal environment for expanding and developing bilateral relations in the field of science and technology, and economy and ensuring the implementation of international treaties concluded between the two countries. The present paper offers a comparative analysis of some of the basic issues of patent such as those relating to the application, examination and protection of patents provided in the national patent laws of the two countries.*

Keywords*: Law of the DPR Korea on Invention; Civil Code of the Russian Federation; invention; utility model; patent*

INTRODUCTION

Patent protection began to be provided from the earliest times as a typical form of intellectual property rights. In Europe, the patent system is traceable to as early as the Renaissance and the first patent law was adopted on 19 March 1474 by the Venetian Republic to encourage inventors and reward them for ingenuity[1]. The Venetian patent statute has since inspired the development of patent systems in Europe, including France[2]. The UK introduced the Venetian patent system in 1559[3] and established the foundation of modern patent law development by enacting in 1624 the Statute of Monopoly, under which inventors of the earliest genuine inventions were granted exclusive rights for 14 years[4] even though the Statute did not aim at promoting invention. Indeed, prior to the last quarter of the 19th century, the regulation of intellectual property was entirely a national issue, with no formal framework for the international co-ordination of the recognition of rights over intellectual property[5].

[1] Stephen P. Ladas, *Patents, Trademarks, and Related Rights: National and International Protection* 6 (Cambridge, MA: Harvard University Press, 1975); Peter K. Yu, *Currents and Crosscurrents in the International Intellectual Property Regime* 38 Loy. L.A. L. Rev. 323-330 (2004).
[2] Peter K. Yu., *Enforcement, Economics and Estimates*, (2) The WIPO Journal: Analysis of Intellectual Property Issues 15 (2010).
[3] Frank D. Prager, *A History of Intellectual Property From 1545 to 1787*, 26 Journal of Patent Office Society 723-724 (1994).
[4] WIPO, *Background Reading Material on Intellectual Property* 19 (WIPO Publication, 1988).
[5] Christopher May, *The Pre-History and Establishment of the WIPO*, (1) The WIPO Journal: Analysis and Debate of Intellectual Property Issues 16 (2009).

National patent laws could only regulate patent applications by their own citizens and national protections for the rights to inventions. Differences in patent laws of different states gave rise to disputes between them, which in turn constituted certain obstacles in international trade.

With a view to resolving such disputes, the Paris Convention for the Protection of Industrial Property[6] (Paris Convention) was adopted in 1883. The convention is the first multilateral treaty on patent and the first international patent law. It aimed at protecting industrial properties such as patents, trademarks, industrial designs, utility models, trade names, indications of source or appellations of origin, and the repression of unfair competition.[7] The convention defines the principle of national treatment[8] and right of priority[9], thus enabling international acquisition and protection of industrial property ownership. In addition, the convention endorsed that patent protection in each state are subject to the domestic law of the relevant state by regulating the principle of patent independence[10], under which domestic law of each state is recognized.

The adoption of the Paris Convention paved a new path for the development of international patent law. The Patent Cooperation Treaty[11] and the Patent Law Treaty[12] were adopted as special agreements for the protection of industrial property under Article 19[13] of the Paris Convention and a number of states enacted national patent laws and adopted the requirements of the Convention under Article 25[14].

In the DPR Korea, national law provisions relating to intellectual property rights emerged together with the foundation of the Democratic People's Republic of Korea. Article 20 of the Constitution that was enacted in September 1948 concurrently with the foundation of the government stipulated that citizens are free to engage in scientific, literary and artistic pursuits and copyright and the right to invention shall be protected by law. This laid the constitutional groundwork for the legal protection of the right to literary works and inventions created by the citizens of the country, and at the same time was the first legal instrument to provide for patent. In accordance with such foundation, the first regulation on innovation was enacted in September 1953,[15] by which the regime of awarding prize money was established. Later, in October 1959, the Regulation on Innovation was amended and included invention in innovation and provided definition[16] and classification[17] of invention. This Regulation was replaced with the Regulation on Invention and

[6] Paris Convention for the Protection of Industrial Property of March 20.1883(as revised at Brussels on December 14. 1900, at Washington on June 2. 1911, at The Hague on November 6. 1925, at London on June 2. 1934, at Lisbon on October 31. 1958 and at Stockholm on July 14. 1967), WIPO Publication No.201(E) and as amended on September 28, 1979).

[7] Paris Convention Art. 1(2).

[8] Paris Convention Art. 2(1).

[9] Paris Convention Art. 4.A(1).

[10] Paris Convention Art. 4bis.

[11] Patent Cooperation Treaty (done at Washington on June 19. 1970, amended on September 28. 1979, modified on February 3. 1984 and on October 3. 2001), WIPO Publication No. 274(E).

[12] Patent Law Treaty (done at Geneva on June 1. 2000), WIPO Publication 258(E).

[13] "It is understood that the countries of the Union reserve the right to make separately between themselves special agreements for the protection of industrial property, in so far as these agreements do not contravene the provisions of this Convention."

[14] "Any country party to this Convention undertakes to adopt, in accordance with its constitution, the measures necessary to ensure the application of this Convention."

[15] The regulation defined innovation as such original ideas as bring about production increase, acceleration of construction, eradication of defective products, curtailment of labor, economization of fuel, material and energy by directly improving production and construction process.

[16] The amended regulation defined invention as an inventive solution that brings about a fundamentally new technical effect to the field of science and technology and production.

[17] The amended regulation classified invention substantial invention, incremental invention and supplementary invention.

Innovation in October 1967. The Regulation enumerated unpatentable items[18] of subject matter and specified procedures for application, examination and registration of inventor's certificates.

The DPR Korea acceded to the World Intellectual Property Organization in August 1974 and became a member of the Paris Convention for the Protection of Industrial Properties and the Patent Cooperation Convention in 1980. In order to faithfully implement these treaties, the DPR Korea amended and supplemented the existing regulations regarding invention and innovation on a full scale in 1986, thus introducing the patent regime[19].

On the basis of preceding experiences, the DPR Korea enacted the Law of the Democratic People's Republic of Korea on Invention as Decision No. 112 of the Standing Committee of the Supreme People's Assembly on 13 May 1998 as the first branch law[20] dealing with patent.

Ushering in the 21st century, a series of measures were taken in order to provide international and domestic legal guarantee for developing national economy with science and technology as a motive power to suit to the requirement of the era of knowledge-based economy. The DPR Korea acceded to the Budapest Treaty on the International Regulation of the Deposit of Microorganisms for the Purposes of Patent Procedure [21] (21 February 2002), Strasbourg Agreement Concerning the International Patent Classification[22] (21 November 2002) and Patent Law Treaty (May 2018), and amended and supplemented the DPRK Invention Law in 2011, 2014 and 2021. Later the Invention Law was amended and supplemented on 29 August 2023[23] as Decree No. 1409 of the Standing Committee of the Supreme People's Assembly in the wake of the establishment, in August 2022, of the Intellectual Property Administration as a national administrative organ dealing with industrial property, including patent, and copyright in a unified way.

Russia has a longer history of patent legislation than the DPR Korea. Patent law was first adopted at about the same time as those of other European countries. The first patent law entitled the Law on Patents for Various Inventions and Discoveries in Art and Handicraft Industry (О привилегиях на разные изобретения и открытия в художествах и ремеслах) in July 1812. The 1812 Patent Law provided for the protection of patents for inventions of individuals or foreign states for a period of three, five or ten years. The 1812 Patent Law was revised three times in 1833, 1870 and 1896 until 1917[24]. The 1833 amendment imposed on the patent holder the obligation to perform preliminary experiment of his or her invention and denied patents for the discovery, invention or improvements thereof that are insignificant, detrimental to the benefits of the society and state, and related to national defence. The 1870 amendment simplified the formalities for granting patents and defined

[18] The categories of unpatentable subject matter defined in the regulation included shape, color or both of an item of industrial arts, trademark design, algorithms, mathematical formulae, graphs, seed reform, and breeding or cultivation of new varieties.

[19] The regulation defined that a patent is a grant that gives the inventor the right to exploit the invention and that a patent lasts for 15 years from the date of filing the application and that others are not allowed to exploit the invention without permission of a patent holder. It also specified the issues of transfer of patents, licensing, royalties, application and examination.

[20] In the DPR Korea, the term "regulation" refers to a legal instrument that is adopted for the purpose of deliberating the provisions of law for its enforcement on a nation-wide scale or ensuring legal control in the field where it is premature to adopt relevant branch law.

[21] Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (done at Budapest on April 28. 1977 and amended on September 26. 1980), WIPO Publication No. 277(E).

[22] Strasbourg Agreement Concerning the International Patent Classification (done March 24. 1971 and amended on September 28. 1979), WIPO Publication No. 275(E).

[23] The Invention Law currently in force is organized into 5 chapters and 72 articles: Chapter 1 Fundamentals of Invention Law, Chapter 2 Application for Inventor's Certificate and Patents, Chapter 3 Examination of Inventor's Certificate and Patents, Chapter 4 Protection of Inventor's Certificate and Patents, and Chapter 5 Guidance and Control over Invention.

[24] А.Н. Сычев, "Защита интеллектуальной собственности в России": Учеб. пособие [Электронное издание], Севастополь : Вебер, 201. at 13.

patent as a document affirming the existence of a right granted to any individuals who invented technologies satisfying the legal requirement of technical novelty.

In line with the development of industry, Russia adopted the Regulation on Patents for Inventions and Improvements (Положение о привилегиях на изобретения и усовершенствования) in May 1896. The Regulation provided clear-cut definition of patent protected by law and refused patent on academic discovery, abstract idea, and manufacture of chemical substances, foodstuff, medicine, etc. It also introduced examination of application for patent, fixed 15-year-long patent protection allowed easy transfer of patents.

Industrial designs became the subject matter of patent since the mid-19th century in Russia. According to the Law on Pictorial and Design Property of Factories (Положение о праве собственности на фабричные рисунки и модели) that came into force in July 1864, an exclusive right to the production of goods was granted to the producer of designs for a period spanning from 1 year to 10 years[25].

In the wake of the October revolution in 1917, patent system was also revolutionized in Russia. The Decree on Inventions (Положение об изобретениях) was adopted (Декрет) in June 1919. The Decree on Invention abolished patent protection for inventions, and all inventions became state property. The Decree recognized inventors' rights to obtain remuneration for their inventions, which was vouched for by the document called Inventor's Certificate. The certificates were issued practically under the same conditions as patents, but the inventors receiving such certificates lost ownership of their inventions, which became state property. At the same time, inventors were entitled to receive a modest remuneration in proportion with the economic results achieved.[26]

After WWI, in order to restore war-devastated economy, Russia put forward a neo-economy policy, according to which Law on Patents for Inventions (Положение о патентах на изобретения) was enacted in September 1924. Under the 1924 Patent Law, patent became the sole means of protecting inventors' rights. The Law provided that patents are granted to the novel inventions that have industrial usefulness, and excluded medicine, foodstuff and matters obtained by chemical methods from the subject matter of patent. Patent protection was given for a period of 15 years and a patent holder was allowed to freely transfer his or her patent so that the third party can use it.

Afterwards, the 1924 Patent Law was abolished by the enactment of the Decree on Inventions and Technical Improvements (Положение об изобретениях и технических усовершенствованиях) of 1931. The 1931 Decree revitalized the former inventor's certificate regime. This did not mean, however, the abolition of patent system. Inventors were granted the right to select protection by either patent or an inventor's certificate. An inventor's certificate provided legal grounds for granting recognition of technical solutions by inventions, privileges of inventors, confirmation of inventions by inventors, and privileges for inventors. Remuneration for the inventors was not paid by a company that used inventive technology but by the relevant state organ depending on the nature of invention taking into count economic value created by the use of invention.

Although the system of patent and that of inventor's certificate coexisted after the enactment of 1931 Decree, inventors' rights were mainly protected through inventor's certificate regime. For example, between 1965 and 1968, about 80 000 inventors' certificates were granted in the Soviet Union, whereas the number of patents was as few as three.[27]

[25] А.П.Сергеев, Право интеллектуальной собстбенности в Российской Федерации, Проспект, 2005, С. 40-42.

[26] Mihály Ficsor, *The Emergence and Development of Intellectual Property Law in Central and Eastern Europe* in The Oxford Handbook of Intellectual Property Law 330-331 (Oxford University Press, 2018).

[27] SP Ladas, *Patents, Trademarks, and Related Rights—National and International Protection*, Vol 1 380 (Harvard University Press, 1975). (indicating that the source was a Brochure of the Soviet Patent Office (GOSPATENT) published in 1969 on inventions and rationalization activities). It is also

The patent law regime took precedence over inventor's certificate regime again by the enactment of the new Patent Law of the Soviet Union (Закон СССР «Об изобретениях в СССР») in May 1991. The inventors' certificates were abolished; patents remained the only legal means to recognize and protect inventions[28]. The 1991 Law, however, did not last long due to the dissolution of the Soviet Union.

The Russian Federation, which inherited the rights of the Soviet Union after its dissolution, enacted yet another new patent law on 23 September 1992. Unlike 1991 Law, the 1992 Law included not only inventions but also utility models and industrial designs in the subject matter of patents. This law is composed of relatively small number of articles, and left such issues as service inventions (also called employee inventions), utility models, industrial designs, inventions classified as confidential by the state, power and operative procedures of the Patent Administration of the Russian Federation etc to be dealt with by other laws.

The patent law was, later, incorporated into Chapter 72 of Part IV of Civil Code of the Russian Federation of 2006, which terminated the effect of the 1992 Patent Law. Afterwards, Part IV of the Civil Code underwent a series of amendments including those in 2010, 2014, 2016 and 2023 and is currently in force.

To summarize the history of the development of the legal regime for protecting inventions of the DPR Korea and Russia, the former start off as an inventor's certificate regime and later introduced the patent regime leading to the coexistence of both, whereas the latter start off as a patent regime but shifted by an inventor's certificate regime or included both finally leaving patent regime as the only means for protecting inventions.

Since patent-related international treaties and conventions, such as the Paris Convention, provide for minimum levels of protection in all jurisdictions for harmonizing IP Laws, national legislation of individual states include distinctive details reflecting the circumstances and the development of the state concerned.

Both being states parties to patent-related multilateral treaties, including the Paris Convention for the Protection of Industrial Property and the Patent Cooperation Treaty, the DPR Korea and Russia have established their national patent systems that fully harmonize with the requirements of international treaties while reflecting their specific national environment and situation at the same time.

The requirements of international patent treaties constitute the similarities of the patent systems of the two countries, while the differences of socio-economic relations of the two countries results in the distinctive features of the two patent systems. This section is mainly devoted to comparing and analyzing the differences between the patent systems of the DPR Korea and Russia in terms of parties and subject matter of patent, granting patent, and restriction of patents.

1. Subject Matter and Holder of Patents

In general, patent is a grant from the government giving an inventor the exclusive right to the invention. Therefore, the parties and the subject matter of patents are primary issues of patent system. With regard to such basis issues, the patent laws of the DPR Korea and Russia differ to certain extent while having a number of similarities.

1.1 Subject matter of patent

The subject matter of patent concerns the question as to what is patentable.

quoted in WA van Caenegem, "Inventions in Russia: From Public Good to Private Property" (1993) Bond University ePublications@bond 233.

[28] Mihály Ficsor, *The Emergence and Development of Intellectual Property Law in Central and Eastern Europe* in The Oxford Handbook of Intellectual Property Law 333 (Oxford University Press, 2018).

In the DPR Korea, patent protection is granted to inventors for inventions and utility models, while in Russia the subject matter of patents includes inventions, utility models and industrial designs with certain differences in the provisions on utility models.
First of all, differences in terms of the subject matter of patents lies in that an industrial design, which is unpatentable under the DPR Korean patent law, is patentable under the Russian patent law.

An industrial design, in general terms, is the ornamental or aesthetic aspect of a useful article.[29] In some countries, designs may be protected as "design patents". In other countries designs are protected under industrial design registration systems.[30] Russia falls into the first category, while the DPR Korea belongs to the second category of countries.

In the DPR Korea, protection for industrial designs is achieved by industrial design law[31], a separate branch law. This is because the contents and methods of examination of patents and industrial designs are distinguishable since patents and utility models are for inventions that bring about functional improvements to a product while industrial design protection is for the appearance of the product.[32] This explains why the DPR Korean patent law is entitled "Invention Law".

On the other hand, Russian patent law is distinctive in that industrial designs as well as patents and utility models are patentable[33]. As mentioned above, industrial designs began to be protected by patent from the mid-19th century. The enactment of Industrial Design Law of June 1965 excluded industrial designs from patentable subject matter, but Patent Law of the Russian Federation enacted in September 1992 made industrial designs patentable again.

The enactment of a separate patent law governing the three rights, namely those for inventions, designs and utility models, prevented the existence of several similar laws. Including, in a single law, the requirements and procedures for patents that are almost identical with respect to the three subject matters simplified patent law.

Next, the patent laws of the DPR Korea and Russia also differs in their provisions on inventions and utility models. The patents laws of the two countries are nearly identical with regard to patentability requirements of inventions, and what can and can't be deemed as inventions, i.e., an invention must have such patentability requirements as novelty, non-obviousness and applicability[34]; discoveries, scientific theories and mathematical methods, solutions concerning only the appearance of articles and aimed at meeting aesthetical needs, the rules and methods of games and of intellectual or economic activities etc. are not deemed as inventions[35]; and varieties of plants, breeds of animals and the biological methods for producing them etc. cannot be protected as inventions[36]. Many of these provisions are common in both patent laws.

The two patents laws, however, are distinctive in terms of the scope of inventions and the definition of utility models.

Firstly, unlike DPRK patent law, Russian patent law includes secret inventions in the subject matter of patents. Generally, one of the main purposes of patent protection is to allow anyone to make use of an invention by publicizing it in exchange for protecting the rights of an inventor. This is one

[29] WIPO, *Understanding Industrial Property* 9 (WIPO Publication No. 895(E)).
[30] WIPO, *WIPO Patent Drafting Manual* 12 (WIPO publication No.867(E), 2010).
[31] Adopted on 3 June 1998, and amended and supplemented in 1999, 2005, 2011 and 2016.
[32] WIPO, *Looking Good: An introduction to Industrial Designs for Small and Medium-sized Enterprises* 13 (WIPO publication No. 498, 2006).
[33] Article 1345 (1) of the Civil Code of the Russian Federation provides that patent is an intellectual property granted for inventions, utility models and industrial designs.
[34] Article 20 of the DPRK Invention Law and Article 1350 (1)-(4) of Civil Code of the Russian Federation.
[35] Article 18 of the DPRK Invention Law and Article 1350 (5) of Civil Code of the Russian Federation.
[36] Article 19 of the DPRK Invention Law and Article 1349 (4) and 1350 (6) of Civil Code of the Russian Federation.

of the main rationale behind the exclusion of secret inventions from the subject matter of patents in a number of countries, including the DPR Korea. In Russia, too, before the amendment to the Russian patent law of 2003, such inventions, utility models or industrial designs that are classified as secret remained unpatentable. Such inventions, if they qualify patentability conditions such as novelty, non-obviousness and usefulness, can be theoretically protected by patent law. States have discretion to legally codify the issue.

What should be noted, however, is that the fact that the DPRK patent law is silent on secret inventions, while Russian patent law includes secret inventions in patentable subject matter does not influence cooperation and exchange between the two states. This is because the protection of secret inventions of Russian patent law is given only to its own nationals. In other words, it is prohibited to classify as secret an application filed by a foreign citizen or a foreign legal entity[37]. Therefore, there is no possibility that the rules on secret inventions of the two countries conflict each other.

Secondly, dissimilarities can also be found in the provisions of utility models. The utility model-the so called small or "petty" patent – is protected by patent.[38] The Paris Convention[39] and the Patent Cooperation Treaty[40] explicitly prescribes that utility model is protected under patent laws. However, no universal and authoritative definition of the term utility model exists, and the perception of the concept slightly differs from country to country. While it is commonly shared among different legal systems that utility models have a lower level of non-obviousness than patents and a shorter period of protection, utility models may, in some countries, be limited to certain fields of technology and may only be available for products (not for processes)[41].

The same is the case in the patent laws of the DPRK and Russia.

The table below comparatively shows the provisions on utility models.

DPR Korea (Invention Law)	**Russia (Civil Code)**
Article 21 (The Conditions for utility model patent or utility certificate)	**Article 1351. The Conditions for the Patentability of a Utility Model**
Inventions that are novel and applicable is protected as utility certificate.	**1.** A technical solution relating to an apparatus is protected as a utility model.
Product inventions related to the shape, structure or the combination of both of products that are novel and practically exploitable is protected as utility model patent.	A utility model is given legal protection if it is novel and industrially exploitable.

As indicated in the table, non-obviousness is not required for utility models in both patent laws. But, Russian patent law confines utility model to technical solutions relating to an apparatus, while the DPR Korean patent law has no such restrictions, i.e., the difference between invention and utility model in the DPR Korea depends only on whether it has non-obviousness or not.

It should be noted that utility certificate and utility model patent is distinguished from each other. Utility models that are related to products can be the subject matter of utility model patent. This indicates that while the DPR Korea and Russia take different approaches to the definition of utility models, the conditions for patentability of utility models are identical.

[37] Article 1401 (3) of Civil Code of the Russian Federation.
[38] *Patents: An information brochure on patents* 13(German Patent and Trade Mark Office, 2010).
[39] Article 1 of the Paris Convention.
[40] Article 2 of the Patent Cooperation Treaty.
[41] WIPO, *Looking Good: An introduction to Industrial Designs for Small and Medium-sized Enterprises* 10 (WIPO publication No. 498, 2006).

The period of utility model protection is 10 years from the date of filing application for patent, which is short in compared to patents for inventions, in both jurisdictions[42].

1.2 Patent holder

The person who conceived the invention is the inventor, whereas the person that files the patent application is the applicant, holder or owner of the patent. While in some cases the inventor may also be the applicant, the two are often different entities[43].

Who can apply for patents in case of service inventions and commissioned inventions, i.e., inventor or employer, and inventor or commissioner, varies in different jurisdictions.

Maintaining the inventor principle according to which inventors are competent to apply for patents, the DPRK patent law and Russian patent law provides separately for service inventions and commissioned inventions.

With regard to commissioned inventions (including commissioned utility models), the two patent laws have nearly identical provisions.

In most countries, an independent contractor hired by a company to develop a new product or process owns all rights to the invention, unless specifically stated otherwise. This means that, unless the contractor has a written agreement with the company assigning the invention to that company, in general, the company will have no ownership rights in what is developed, even if it paid for the development.[44]

The same is the case with the patent laws of the DPR Korea and Russia[45].

But who applies for patents for service inventions varies in the two patent laws. About 80 to 90 percent of all inventions are service inventions, which mean inventions made by employees within the scope of their employment.[46]

Patent laws of all states contain provisions defining who is to be granted patents between inventor or employer.

The relevant provisions of patent laws of the DPRK and Russia are shown in the table below.

DPR Korea (Invention Law)	**Russia (Civil Code)**
Article 12 (Application for Inventor's Certificate and Patent in the Name of Institutions, Enterprises and Organizations) In case of an employee invention that is made in the course of employment or by using material and technical means (hereinafter referred to as employee invention), application shall be filed in the name of institutions, enterprises and organizations file an application	**Article 1370. The Service Invention, Service Utility Model and Service Industrial Design** **1.** An invention, utility model or industrial design created by an employee in the course of his duties or a specific assignment of the employer shall be deemed a service invention, utility model or industrial design. **3.** The exclusive right to a service invention, service utility model or service industrial design

[42] The term of patent protection is 15 years from the date of filing of the patent application and may be extended for another 5 years. The exclusive right to an invention is effective from the day when the patent application is filed for 20 years, and the effective term of the patent for invention is not extended by a term exceeding 5 years.
[43] WIPO, *Inventing the Future: An Introduction to Patents for Small and Medium-sized Enterprises* 14 (WIPO Publication No. 917(E), 2006).
[44] WIPO, *Inventing the Future: An Introduction to Patents for Small and Medium-sized Enterprises* 15 (WIPO Publication No. 917(E), 2006).
[45] Article 14 of the DPRK Invention Law and Article 1371 of Civil Code of the Russian Federation.
[46] *Patents: An information brochure on patents* 12(German Patent and Trade Mark Office, 2010).

for either a patent or an inventor's certificate.	and the right to obtain a patent are owned by the employer, except as otherwise envisaged by a labour contract or civil law contract between the employee and the employer. **5.** An invention, utility model or industrial design created by an employee through the use of money, technical or other material means of the employer but other than in the line of duty or a specific assignment of the employer shall not be deemed service. The right to obtain a patent and the exclusive right to such invention, utility model or industrial design are owned by the employee. In this case the employer is entitled at his/its own discretion to claim a free-of-charge simple (non-exclusive) licence for the use of the created result of intellectual activity for his/its own needs for the whole effective term of the exclusive right or compensation for the expenses incurred by the employer in connection with the creation of the invention, utility model or industrial design.

As the table illustrates, provisions on service invention differ in two aspects.

One concerns the concept of service invention. An invention created by an employee through the use of money, technical or other material means of an institutions, enterprises and organizations (employer) is deemed service invention in the DPR Korea, whereas it's not the case in Russia.

Another difference is that, in the DPR Korea, patent (particularly exclusive right) is automatically granted to the institutions, enterprises and organizations to which an inventor is affiliated, whereas in Russia, patent may be granted to an employee subject to the contract although it is, in principle, given to an employer. In a word, difference exists as to whether it is possible to determine an eligible applicant for service invention patent according to labor contracts or civil contracts. Unlike Russia, in the DPR Korea the relationship between an employee and an institution he or she is affiliated to is not contractual relations. Therefore, no labor or employment contracts exist between them, and the patent for service invention is automatically given to an institution, enterprises or organization the inventor is affiliated to.

An inventor, of course, has the right of attribution in respect of his or her service invention[47], and is entitled to get fee from a patent holder[48].

2. Registration of Patents

Unlike many other forms of IP, patent rights come into existence only after an administrative process of application, examination, and registration.[49]

The patent laws of the two countries have a number of articles deliberating on such administrative procedures. The articles share many common features as they both reflect the requirements of international treaties to which they acceded. Some variations, however, do exist.

[47] Article 47 (1) of the DPRK Invention Law and Article 1370 (2) of Civil Code of the Russian Federation.
[48] Article 47 (2) of the DPRK Invention Law and Article 1370 (4) of Civil Code of the Russian Federation.
[49] Dan L. Burk, *Patents and Related Rights: A Global Kaleidoscope: The Oxford Handbook of Intellectual Property Law* 464 (Oxford University Press, 2018).

2.1 Application for patents

In most countries worldwide patents are granted on a first-to-file basis.[50]

Patent systems in both the DPRK and Russia are also based on the first-to-file rule, and therefore, the first step in getting a patent is to file a patent application.

The following are commonly-shared provisions in both patent laws: Patent application should be filed separately for each invention, but when more than two inventions constitute a single invention, it can be applied by a single application[51]; the application document must comprise a patent application including the name of the applicant, that is, of the person entitled to receive a patent, and also his or her place of residence or location, a synopsis, a description of the invention, scope of claim etc[52]; and the application documents should be filed in the mother tongue and if the documents of the application are filed in another language ,a translation thereof into mother tongue should be attached to the application[53].

What distinguishes the two patent laws is the transformation of an application, since the DPRK patent law protects inventions by both patent and inventor's certificate, while Russia includes industrial designs as the subject matter of patents. It is shown in the table below.

DPR Korea (Invention Law)	**Russia (Civil Code)**
Article 26 (Disaffirmation or Transformation of an Application) An applicant can disaffirm his or her application or request to transform an inventor's certificate into a utility certificate or vice versa, a patent into a utility model patent or vice versa, a patent into an inventor's certificate, or a utility model patent into a utility certificate before the examination of the application for an inventor's certificate or a patent …. A request for transforming an inventor's certificate into a patent should be made before the publication of substantive examination.	**Article 1379. Transforming an Application for an Invention or Utility Model or Industrial Design** **1.** Until the publication of information on an invention application (Item 1 of Article 1385) but not later than the date of a decision on the issuance of a patent, or, when adopting the decision on the refusal to issue the patent for an invention or declaring an application withdrawn, before the possibility of filing an objection against this decision provided for by this Code, the applicant is entitled to transform it into a utility model or industrial design application … **2.** The transformation of a utility model application into an invention or industrial design or an industrial design application into an invention or utility model application shall be permitted on the basis of an application filed with the federal executive body …

As can be seen in the table, in the DPRK patent law an application for an invention can be transformed into that for a utility model, or vice versa, while in Russian patent law applications for inventions or utility models can be transformed into those for industrial designs.

A patent holder has an exclusive right to his or her inventions, but, as for inventor's certificate, a state has an exclusive right and anyone can freely use it. In the DPRK, inventors can select and apply for either of them and have a right to require transformation from one type of protection to another.

[50] WIPO, *Inventing the Future: An Introduction to Patents for Small and Medium-sized Enterprises* 21 (WIPO Publication No. 917(E), 2006).
[51] Article 25 of the DPRK Invention Law and Article 1375 (1) of Civil Code of the Russian Federation.
[52] Article 10 of the DPRK Invention Law and Article 1375 (2) of Civil Code of the Russian Federation.
[53] Article 11 of the DPRK Invention Law and Article 1374 (2) of Civil Code of the Russian Federation.

2.2 Examination of Patent Applications

Examination of patent application is the stage when a competent organ evaluates and determines the illegibility of an applicant and the patentability of applied inventions or utility models. This stage is an indispensable stage for granting patents.

Although many jurisdictions are common in that examination is carried out in two steps: formal and substantive, but whether these two steps include publication of application, request for examination, and post-grant opposition vary depending on the states concerned.

In the DPRK and Russia, the examination of patent application has two stages – formal[54] and substantive[55], the application is published[56].

However, with respect to request for examination and post-grant opposition, the two patent laws take divergent approaches. The DPRK patent law allows post-grant opposition and does not require request for examination, while Russian patent law is quite the opposite.

In general, opposition proceedings are designed to ensure that patents are not granted on claimed inventions that do not satisfy the patentability requirements[57], and it is divided into pre-grant opposition and post-grant opposition. The pre-grant opposition system provides a third party an opportunity to make a request for a refusal of an application before a patent is granted to that application[58]. The pre-grant opposition system has an advantage of contributing to the accuracy of patents granted, but the problem with such pre-grant opposition is that there is often very considerable delay in achieving a grant. This is why most countries do not employ pre-grant opposition system.

The DPRK patent law, however, allows pre-grant opposition. The rationale behind this is to ensure that examinations of applications are undertaken in a more scientific way.

On the other hand, the system of examination request, under which not all applications are examined but only the applications for which the applicants requested examination within a certain period, and the applications for which no examination requests were made are regarded as waived, aims at reducing the number of applications to be examined thus preventing delay in examination processes.

In this connection, patent laws of a number of countries, including not only Russia[59] but also China[60], Germany[61] and Australia[62] incorporates the system of examination request.

The DPRK Invention Law, however, does not stipulate procedures of examination request, but provides that the applications that are disclosed after passage in formal examination must automatically proceed to substantive examination. Immediately after the receipt of an application, the patent administrative organ undertakes a formal examination, and when the formal examination is completed, the application is disclosed and, at the same time, the application enters into the substantive examination process regardless of the applicant's will.

The procedures of registering patent after formal and substantial examination of the two patent laws are almost the same, so it does not warrant special attention.

3. Qualifications of Patent

[54] Article 31 (1) and (2) of the DPRK Invention Law and Article 1384 of Civil Code of the Russian Federation.
[55] Article 34 of the DPRK Invention Law and Article 1386 of Civil Code of the Russian Federation.
[56] Article 31 of the DPRK Invention Law and Article 1385 of Civil Code of the Russian Federation.
[57] WIPO, *Promoting Access to Medical Technologies and Innovation: Intersections between public health, intellectual property and trade* 173 (WIPO Publication No.628(E), 2012).
[58] WIPO, *WIPO Intellectual Property Handbook* 408 (WIPO Publication No.489(E), 2004).
[59] Article 1386 (1) of Civil Code of the Russian Federation.
[60] WIPO, *World Intellectual Property Indicators* 11 (WIPO Publication No.941E/17, 2017).
[61] *Patents: An information brochure on patents* 19 (German Patent and Trade Mark Office, 2010).
[62] A guide to applying for your patent: IP Australia Patents Application Guide, 2012, p.18.

In general, patent has certain qualifications subject to law. A set of qualifications prescribed in the patent laws of the DPRK and Russia concern the period of patent protection, actions not deemed patent infringement and the right of prior use etc.

In terms of qualification of patent, the patent laws of the DPRK and Russia share many in common while having certain disparities.

This part of the paper deals with distinctive features of the patent laws of the two countries regarding qualification of patent.

3.1 Terms of copyright protection

The period of protection of utility model is 10 years in both the DPRK and Russian patent laws. But as for patent, the term of patent protection in the DPRK patent law is 15 years from the date of filing the patent application (and may be extended for another 5 years if required) while Russian patent law provides for 20-year-long protection with 5-year-long extendibility.
In general, patents are protected for 20 years in a number of countries, which is one of the basic requirements of the Agreement on Trade-Related Aspects of Intellectual Property Rights [63]. The relatively short period of patent protection seems to gear towards transformation of new inventions or utility models into public domain, and it is unlikely that the patent law of this country is in contradiction with international patent law since it is not a party to the Agreement on Trade-Related Aspects of Intellectual Property Rights.

3.2 Actions not deemed patent infringement

The provisions regarding actions that are not deemed of patent infringement are shown in the table below.

DPR Korea (Invention Law)	**Russia (Civil Code)**
Article 65 (Actions not deemed patent infringement) Patent infringement does not occur in the following circumstances; (1) when a third party uses, sells or imports the patented products or the goods produced through patented processes after a patent holder or a licensee sells those products, (2) when a third party, who has been legally exploiting a patent or prepared to exploit it before the date of filing of a patent application, uses the patent only to that extent, (3) when an invention is exploited only for the purpose of the operation of a foreign vehicle that passes through the country or is temporarily staying in it, (4) when an invention is used only for the purpose of science research and experiments, and (5) when an invention is used for the purpose of compounding a medicine according to a prescription of a doctor for the treatment of an	**Article 1359. Actions Not Deemed an Infringement of the Exclusive Right to an Invention, Utility Model or Industrial Design** The following are not deemed an infringement of the exclusive right to an invention, utility model or industrial design: 1) the use of a product in which the invention or utility model is used, and the use of an article in which the industrial design is used, in the design, in auxiliary equipment or in the operation of vehicles (water, air, road and rail means of transport) or spacecraft of foreign states, provided these vehicles or spacecraft are temporarily or incidentally located on the territory of the Russian Federation and the said product or article is used solely for the needs of the vehicles or spacecraft. Such action shall not be deemed an infringement of the exclusive right in respect of vehicles or spacecraft of the foreign states that grant the same rights in respect of the vehicles or spacecraft registered in the Russian Federation; 2) the carrying out of scientific research of a

[63] Article 33.

individual patient	product or method in which the invention or utility model is used, or of scientific research of an article in which the industrial design is used, or the carrying out of an experiment in respect of such product, method or article; 3) the use of the invention, utility model or industrial design in emergency circumstances (natural calamities, disasters, accidents), with the patent holder being notified of this use as soon as possible and with commensurate compensation being paid henceforth to the patent holder; 4) the use of the invention, utility model or industrial design for meeting personal, family, household or other needs other than entrepreneurial activity, unless profit-making or making earnings is the purpose of the use; 5) the one-off manufacturing of medicines with the use of the invention in a chemist's shop on a physician's prescription; 6) the importation onto the territory of the Russian Federation, the application, offer for sale, sale, another introduction into civil-law transactions or storage for such purposes of a product in which the invention or utility model is used or of an article in which the industrial design is used, if the product or article has been earlier introduced into civil-law transactions on the territory of the Russian Federation by the patent holder or by another person by permission of the patent holder, or without a permit thereof, but upon condition that such introduction into civil law transactions was rightfully effected in the instances established by this Code.

As can be seem in the table, the two laws have many in common with respect to the actions deemed infringement of patents.

What distinguishes them is that the DPRK patent law does not provide the use of patents for individual and emergency purposes as actions not deemed patent infringement, while the Russian patent law does not include the right to prior use in the actions not deemed patent infringement.

With regard to the use of patents in emergency circumstances, the DPRK provide such use in the article dealing with compulsory license.

Article 1362 of Civil Code of the Russian Federation dealing with compulsory license only anticipates the condition where an invention or industrial design is not used or is insufficiently used by the patent holder within four years after the issuance of the patent, and a utility model within three years after the issuance of the patent without justifiable reasons, but Article 54 of the DPRK patent law anticipates not only the condition where patens are not used for a certain period of

time (3 years) but also the conditions where it is deemed urgently necessary to use patents for the benefits of the state and the society.

Therefore, in emergency circumstances, this article is invoked and relevant inventions or utility models are used under compulsory license, where patent holders are given adequate notice and remuneration. The provisions regarding use of patents in emergency circumstances in the patent laws of the two countries are identical in essence.

On the other hand, the right to prior use of patents is not provided in the article dealing with infringement of an exclusive right but in Article 1361 dealing specifically with the right of prior use of an invention, utility model or industrial design. This article is identical to Article 65 (1) (b) of the DPRK Invention Law.

What differentiates the patent law of the DPRK from that of Russia is the use of patents for individual or non-for-profit purposes. The absence of provisions regarding individual or non-for-profit purposes in the DPRK Invention Law concerns with unlikeliness of the occurrence of such circumstances in this country.

What is common in patentability of inventions or utility models is industrial applicability. Therefore, inventions or utility models must be used for making certain products, which necessarily requires the use of means of production. In the DPRK, all means of production are owned by the state and social cooperative bodies[64] and individual ownership is restricted to individual and consumptive ownership[65]. Therefore, there is no possibility that industrial production is made within individual or family range whether it is non-for-profit or not, which makes it unnecessary to specifically regulate in the patent law.

Conclusion

Besides the aforementioned differences, the right of post-use, and inventions or utility models created under the contract with the state or a city etc stipulated in Russian patent law are not dealt with in the DPRK patent law.

In conclusion, however, the overall patent system, including the patent holder and the subject matter of patents, application, examination and registration of patents, and protection and qualification of patents etc share more in common than not.

Such similarities might contribute to establishing favorable legal climate for technical exchange and cooperation between the two countries.

It is expected that the present paper offering comparative analysis of the patent laws of the DPRK and Russia would be helpful to strengthening contact of legislative, enforcement or judicial bodies of the two states and exchanging experiences and views regarding matters of mutual concern in the field of legislation and enforcement.

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