Pathology of the Inventive Step Requirement in the Patent Law with a Look at Iranian Law

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Abstract: The of the inventive step requirement, which apparently guarantees the growth of innovation and pursues industrial and economic development, despite enjoying some benefits, has always faced challenges, and in some cases such challenges are in conflict with the basis of the patent system, and it shows that the patent system is not always socially useful. The analysis of the mentioned challenges is mainly based on the economic principles and assessment tools of the requirement, i.e., examiners and person having ordinary skill in the art. Iran's patent system can also be criticized in terms of legislation and implementation and needs to be reformed. In this article, we intend to first examine the economic pathology regarding the assessment of the inventive step requirement in the patent system, then present the appropriate criterion that is similar to the copyright system, and explain the necessary suggestions.

Keywords: Pathology, Inventive Step, Economic Bases, Person Having Ordinary Skill in the Art.

1. INTRODUCTION

The ultimate goal of the patent system is to improve the level of social welfare through economic development (Aoki and Spiegel, 1999:1 Kou, Rey, Wang, 2010, p.12). In accordance with such a goal, it has been tried to provide the most desirable tools to the patent system and apply the most suitable methods. The most important tool of the invention system (Mandel, 2007, p. 3) to achieve this goal is the requirement of the inventive step. This requirement means that the invention is not obvious to a person with ordinary skill in knowledge according to the previous technology or industry (Jafarzadeh and Mahmoudi, 138, p. 104). Regardless of the single concept that is prescribed for the mentioned requirement in the vast majority of legal systems, different criteria are used to evaluate and verify it in different patent offices in different countries and regions (ref: Najafi, 1390, pp. 155-262).

The various assessment criteria show that according to the policy makers of the patent systems of different countries, the desired criterion is the most desirable way to achieve the ultimate goal of the patent system. Now, the analysis of the economic foundations of the inventive step requirement indicates that the said requirement is not always able to help the system of inventions in achieving its goals and in many cases, it has faced special challenges and this doubt that the system of inventions is always and absolutely useful and it is not socially productive, it strengthens. The four economic views of choice value, chain innovation, error-cost and complementary innovation, although they try to justify the economic basis of the requirement of inventive step, but each of them contains flaws that prove the above suspicion (Denicolo, 2008, p 443).

The assessment tools of this requirement, i.e., examiners and a person with ordinary skill in the knowledge and characteristics attributed to each and the issues related to them, including the issue of commenting based on personal inference and the level of skill attributed to a person with ordinary skill, in turn create challenges for this requirement. and represents damages against the said requirement. In addition to the existence of such challenges in the patent system, Iran's law in this field also faces its own challenges. in terms of Legally and also in terms of implementation, Iran's patent system has deep problems in the field of inventive step requirement, which, regardless of the need for reform, indicates that the inventive step requirement in Iranian laws cannot be used in the direction of economic and industrial development. This is despite the fact that the requirement of originality, which preserves the originality of intellectual phenomena in the copyright system, reaches its desired goal in a very simple way and without the special complications of the requirement of the inventive step in the patent system.

But according to the specific requirements of the field of inventions, it seems that the combination of originality criterion and some parameters in the invention system and the requirement of inventive step is the most desirable system and criterion to support inventions and ultimately economic development and improve the level of social welfare, especially in law. Iran has been and to a large extent far away from the objections to the requirement of an inventive step. The purpose of this article is to present the concept of the

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inventive step requirement and the pathology related to it in foreign law and Iranian law, to present its proposed system and provide appropriate recommendations.

2. PATHOLOGY OF INVENTIVE STEP REQUIREMENT

The damage of the inventive step requirement is well visible both in the analysis of the economic foundations of this requirement and in the review of its assessment tools, which we will discuss in this article.

2.1. Economic Principles

In order to examine the damages of the inventive step requirement based on the analysis of the economic foundations of this requirement, we are forced to present the aforementioned analyzes in order to also examine the intended damages.

2.1.1. Option Value Perspective

The point of view of choice value is based on the concept of irreversible investment (Denicolo, op.cit, p 449). Explaining that, if an inventor registers and protects his undesirable mental idea in the form of a patent, he can through Establishing a monopoly deprives potential future inventors of the opportunities that may be created in the future to develop desirable innovations (ibid, p444). Based on this point of view, the requirement of an inventive step has been established in order to support such innovators, so that their rights are not lost due to early and untimely patents (ibid, p449)).

An economic model based on this point of view has been designed and drawn to explain the nature of this problem. In this model, there is a hypothetical population of a large group of potential inventors who work for the advancement of the technology market. In this population, at any moment there is a possibility that a certain scientific idea will accidentally come to the mind of each of these inventors. The key point of this model is the same issue. These possible ideas are homogeneous and their only difference is that they have different implementation costs; So that if this difference does not exist, these ideas can completely replace each other (Erkal and Scotchmer, 2007, p 4). In this situation where the possibility of homogeneous ideas that differ from each other only in terms of implementation costs exists for everyone, if the patent protection system is wide enough or there is intense competition in the innovation production market, the first idea It will be implemented and the resulting innovation will be registered as a patent and after that the flow of innovation production will be stopped. In this case, only the first inventor can compensate the costs incurred for the production of innovation, and the costs of other potential innovators will be irreversible (ibid, 4-5).

According to this model, the optimal solution in this situation is to support only those inventions whose implementation cost is lower than a special index. This explanation is that if the probability of ideas coming to mind is high, the value of choosing not to invest in those ideas is also high. In other words, it is desirable not to invest in this situation. In a situation where the probability of ideas coming to mind is high, the limit of the mentioned index is low (Denicolo, op.cit, p. 450).

2.1.1.1. Pathology

According to this point of view, the exorbitant costs of research and development institutions are a sign of the obviousness of the invention, but in the presented model based on it, inventions containing an inventive step are generally considered to have a high implementation cost. That is, the application of the inventive step requirement will lead to an increase in production costs, and high production costs will lead to an increase in the price of technology in the market. Therefore, the requirement of an inventive step is in conflict with the rights of consumers. In addition, the economic logic does not reflect such a thing, because the requirement of the optimal economy is that the maximum possible production is done with the minimum resources and the lowest cost, and the competitive power is increased with appropriate pricing (Sadeghi Moghadam, Ghafari Farsani, 2013, p. 115).

2.1.2. Sequential Innovation Perspective

Based on this point of view, current inventors succeed in producing innovations by taking advantage of previous innovations, and their production knowledge is also a basis for producing future innovations (Encaoua, Guellec, Mart´ınez, 2006, p.1428)).

In a competitive market, the emergence of late inventors has a negative effect on the rights of early inventors. With the arrival of new inventions and the competition between them in the technology market, the interests of the early inventors will be jeopardized and gradually disappear. It is clear that with the entry of new technologies into the market, which of course have been produced using past technologies, recent technologies are removed from the competition scene

and the interests of their owners are harmed (Denicolo, op.cit, p.450)).

According to this point of view, in the course of chain or cumulative innovation, it is necessary to support the previous inventors (early), along with the current inventors (late) -Scotchmer, 1991, pp. 29-41)).

This protection is done in two ways: 1- through the requirement of novelty 2- through a wide range of protection for inventors (leading breadth protection). Denicolo and Zanchttin, 2002, p 802) Meanwhile, some believe that by applying the inventive step requirement, it is possible to support the early inventors. That is, the economic basis of the requirement of the inventive step is to support the inventors first (Scotchmer and Green, 1990, pp. 142-143)). However, there is no consensus regarding the required level to apply this requirement.

The strict application of the inventive step requirement reduces the possibility of registering recent innovations, and as a result, the period of exclusive rights granted to the first inventor will be longer, or in other words, the beginning of the period of exclusive rights granted to the last inventors will be delayed. As a result, on the one hand, strict application of the inventive step requirement, in order to support early inventors, will increase the motivation of innovators to produce innovation, and on the other hand, not supporting late inventors in this case will lead to a decrease in said motivation Hunt, 2004, p 411-413)).

But applying a balanced level of this requirement, in such a way that only minor inventions are not registered due to its application, and gradually and over time, the level and intensity of this requirement will increase to match the new requirements of the technological space, which will lead to Any period and requirements are only unregisterable unimportant inventions (ibid, p.411-414).

2.1.2.1. Pathology

According to this model, in the process of chain innovation, if the inventive step requirement is applied with more strictness, the possibility of registering the latest innovations will decrease, and as a result, the duration of exclusive rights to the first inventors will be longer. In this situation, the strict application of the inventive step requirement, although in order to support early inventors, increases the motivation of innovators, but due to the lack of support for late inventors, it reduces the aforementioned motivation (ibid, p.411-413)). In the assumption of applying a balanced level of this requirement, in our opinion, although some insignificant innovations do not bring many benefits for the inventor, they may be economically important for the public and the society will suffer if they are not registered.

2.1.3. Error-Cost Perspective

Various features can be listed for the patent system, but among them, two features are more important; The extent of the scope of support and maximum effect in the growth and development of technology.

The feature of the scope of protection is generally desirable, but it is not enough to achieve the main purpose of the patent system. Other requirements must also be met, otherwise the patent system will have adverse consequences, because in a situation where protection includes all technologies and the exclusive rights of inventors are limited to the product or process mentioned in the document describing the invention, Idermark, 2009, p.7), Jafarzadeh and Mahmoudi, 1385, p.73) the system of inventions will appear practically useless. Because the document describing the invention contained in the declaration is disclosed to the public (Wipo, 2004, p. 21)). Therefore, others can violate the inventor's rights by copying the content of the specification document.

The extension of the scope of protection will not be effective if it is not accompanied by the determination and guarantee of the scope of granted rights, and since human language is ambiguous even assuming the existence of the best ideas and thoughts, certainly the courts and patent offices in determining the scope of granted rights should also They will go wrong. In this case, two types of errors are possible (Denicolo, op.cit, p.453):

1. Failure to protect the inventions disclosed by the inventor.

2. Supporting issues that have already been disclosed and placed in the public domain.

According to the error-cost perspective, in order to reduce the risk of second-type errors, only issues that are far enough away from the technological frontier and contain a certain amount of inventive step should be supported - Denicolo, op.cit, p. 453)).

2.1.3.1. Pathology

Applying the inventive step requirement in this case will not support small innovations. For this reason, the

society cannot benefit from the existence of these innovations. If the aforementioned requirement is not applied, even though the owners of insignificant innovations will be supported, but in return for this support, because their innovations are not advanced, nothing will accrue to the society. Copying of inventions is also prohibited in this model, although in some cases copying may benefit the technology production flow. For this reason, according to some people, when the flow of innovation production is continuous or complementary, copying inventions will be socially useful and fruitful, because this work leads to an increase in innovation production (Bessen and Maskin, 2006, p. 2).

2.1.4. Complementary Innovation Perspective

In some cases, the creation of a new software or DNA requires the use of hundreds of complementary products that are used in other technologies. These products may also be protected in the form of one or more patents. The result is clear; Inventing a new product will require the protection of several patents. This will lead to the increase of intellectual property rights and its division. Separation of intellectual property rights, together with other requirements, will lead to an increase in transaction costs and disrupt the balance of prices in the market. Heller and Aisenberg, 1998, pp. 698-701) According to this view, the optimal solution to deal with such a situation is to avoid the registration of some patents, because this prevents the fragmentation of intellectual property rights, reduces transaction costs, and leads to the balancing of prices.

This perspective aims to achieve such goals through its economic models. The content of these models is different;

Meanwhile, some models focus on the inventive step requirement and its effects. In this context, the question of some people is whether each of the components of technology should be supported independently or the protection due to the patent system should only be granted to inventors who have succeeded in producing all the components of new and complex technology (ibid, p7-8). On the other hand, some others, by accepting the assumption of independent support of each technology component, raise the question of what level of inventive step requirement is desirable for each of the independent technology components (Denicolo and Holmenschlager, 2009, pp. 4-7))? Some Meniere, 2004, pp. Based on the opinion of other experts, Scotchmer and green, op.cit, pp.142-143)) believe that the strict application of the said requirement causes the growth and prosperity of innovation. This is done by reducing the transaction costs caused by the division of intellectual property rights, because the more difficult the inventive step is, in the long term it will lead to a significant reduction in the number of exclusive rights holders, and as a result, the intellectual property rights are not divided. And finally, transaction costs are reduced and innovation flourishes.

According to the designers of this model, the requirement of the inventive step in the course of complementary innovation should be applied more strongly, that is, it should be more difficult to obtain a patent, but if it is granted, the duration of exclusive rights should be long and its scope should be wider. On the contrary, in the course of independent innovation, there is no need to strictly apply the inventive step requirement.

2.1.4.1. Pathology

According to the above point of view, in highly advanced and complex sciences such as biotechnology and software, the inventive step requirement should be applied more intensively compared to other fields. It means that it is more difficult to get a patent for the independent components of the mentioned technologies compared to other fields. This may reduce the incentive to disclose small innovations, because the owners of such innovations think that the probability of not registering their inventions is high. The result is obvious; Expenditure on re-economic costs for undisclosed innovations; That is, to produce an innovation, many costs are incurred. Carrying out repeated expenses has no economic logic and will cause a waste of social capital.

2.2. Pathology Based on Assessment Tools

The assessment of the inventive step requirement in the patent offices is the responsibility of the "examiners " of the office. The examiners perform the assessment based on the previous technique or industry and with regard to the person with ordinary skill in the knowledge of the work. One of the challenges in this field is that examiners usually examine the claimed invention according to their personal inference (personal bias). In addition, "a person with ordinary skill in knowledge" which is a hypothetical entity and contains certain characteristics in the doctrine of inventions, (Dumbraveanu, 2009, p. 35) another challenge is the requirement of the inventive step that is examined in this section.

2.2.1. Examiners Pathology

Since according to the laws of invention, the criterion of whether or not the claimed invention is obvious is to recognize a person with ordinary skill in knowledge, for this reason the evaluator must put himself in the position of such a person to be able to properly examine the matter. In fact, the assessment of the requirement of the inventive step is done by examiners who replace a person with ordinary skill in knowledge and perform the assessment based on their personal inference (personal bias). Assessment with personal bias as well as substitution of the evaluator (a non-expert person) in the place of a person with ordinary skill in knowledge are disadvantages of the inventive step requirement in this field, which are discussed below.

2.2.1.1. Substitution of a Non-Specialist (Examiner) in the Place of a Person Having Ordinary Skill in the Art

Examiners who lack the special knowledge and expertise required in the technical field of the invention, must put themselves in the position of a person with ordinary skill in knowledge to determine whether or not the claimed invention is obvious. In fact, according to the law, examiners must put themselves in the mental state of another person and make a decision regarding a specific issue. This issue is not only psychologically impossible, but in very advanced technologies, it clearly shows the desired damage. Because in these technologies, it is probably impossible for the evaluator to know the whole subject (Mandel, 2008, p. 98). Although the evaluator does not rely solely on his own judgment to determine the clarity or lack of clarity of the claimed invention, and for this purpose, he can also use the expert's certificate and other evidences about the relevant knowledge, but in many cases, this cannot lead to the solution of the discussed problem. because, for example, where the evaluator is not personally able to recognize the technology or the problem in question, he certainly does not have the authority to judge the expert's opinion.

Substitution of examiners in the place of a person with ordinary skill in knowledge is based on the assumption that the information of the examiners exactly represents the knowledge and skill of a person with ordinary skill in knowledge, although the analysis shows that such an assumption is not completely true (Benjamin & Rai 2007, pp. 277-288); Because the field of learning of examiners are different from the activities that a person with ordinary skill in knowledge is able to do. Examiners ' knowledge is only limited to the general field of technology contained in the patent application and lacks skills in relation to the complex details of the claimed invention (Lichtman & Lemley, 2007, p.p 45-53). In addition, the access of examiners to information sources and databases is severely limited, while in order to carry out innovative work, there is no assumption of limitation in access to resources for a person with ordinary knowledge skills (ibid, pp.46- 47).

Based on this, it can be concluded that the replacement of the evaluator in the position of a person with ordinary skill in knowledge is not correct and the evaluator cannot provide an accurate opinion regarding the inventive step of the claimed invention.

Commenting Based on Personal Inference (Personal Bias in Commenting)

The effect of knowledge of past events on people's opinions about the same issue or other issues is known as personal bias in opinion (Loftus, 2007, p. 1374), Atance Meltzoff Bernstein). We give an example to better understand the issue; If we learn through the news that a certain incident has happened somewhere, we will immediately announce that we had prior knowledge of the occurrence of such an incident. The same problem can be seen in the assessment of the inventive step requirement, that is, when the evaluator starts to examine the claimed invention, he thinks that he is already aware of the invention of such a subject and therefore considers the invention to be self-evident by mistake. One of the main reasons for the occurrence of such a situation is that the assessment of inventions usually takes place after a relatively long period of time has passed after the registration of the declaration of the claimed invention (Dumbraveanu, op.cit, p.1). The occurrence of this in a country like Japan, which simply filing a statement without a subsequent request for assessment does not lead to the assessment of the statement (Wipo, 2001, p49), will be very likely and common. The mentioned bias will lead to the incorrect rejection of many inventions, which harms the production of innovation in two ways: 1- non-recovery of the inventor's expenses, which results in the decline of the incentive role of the invention system for the production of technology. 2- Depriving the society of inventions that social funds have also been spent for its production, and they may have many benefits (Denicolo, op.cit, p56).

In fact, as soon as the appraiser identifies the claimed invention or finds out how the invention was achieved, it will most likely seem obvious, that is,

people are cognitively unable to prevent the impact of future information on the analysis of past events (Mandel)., 2007, p. 3).

In addition, the personal bias of the examiners aggravates the errors caused by substituting a non-expert person in the place of a person with ordinary skill in knowledge, which we explained about (ibid, p. 21).

All of these factors reduce the potential incentives of innovators to produce innovation and make it difficult to make a decision regarding the amount and location of scarce innovation resources. The solution is to determine the level of initiative required for the requirement of ambiguity, despite the complexity and difficulty, and to reduce personal bias in assessments (Mandel, 2008, p. 337).

2.2.2. Person Having Ordinary Skill in the Art

One of the prerequisites for evaluating the requirement of an inventive step is to determine a person with ordinary skill in knowledge and its characteristics (Dumbraveanu, op.cit, p.1); The characteristics and level of information of this hypothetical person should be examined at the time of submission of the statement, which in many cases goes back to several years before its assessment (ibid, p48). The negative consequences of this matter are well clear; Because after the registration of the statement and at the time of the assessment of the alleged invention, which may be several years after the date of registration, the improvement of the scientific and qualitative level of a person with ordinary skill in knowledge is not taken into account, while the inventors of the invention are aware of these developments and the inventive step of the alleged invention are checked accordingly. In none of the legal texts, the normal skill level of this person has not been specified, which in turn makes it more difficult to evaluate the said requirement and encourages examiners to comment based on their own conclusions (Eisenberg, 2004, p887). Only in some regulations, some of the characteristics of a person with ordinary skill in knowledge have been expressed and the assessment of the skill level has been assigned to examiners (Signore and Kunini, 2008, p. 17).

Although the level of skill attributed to a person with ordinary skill in knowledge relative to the prior art or industry is not known, such characteristics are also difficult for examiners to assess. This is why most of the violated opinions of appraisers in appeals in Europe and America are due to the appraisers' misinterpretation of such features (Dumbraveanu, op.cit, p.49).

In addition, some characteristics of a person with ordinary skill in knowledge are also in conflict with each other, which adds to the difficulty of evaluating the requirement of the inventive step. The exact compatibility and coordination of such features is not easily possible. For example, in the guidelines for evaluating the requirement of innovativeness in the United States and Europe, it is stated that "a person with ordinary skill in personal knowledge has the power of reasoning and is an expert in a certain technical field, but has no innovative or creative ability, or that A person with ordinary skill in knowledge is creative, but not an innovator. How can a person, while being skilled and expert in a certain field of technology, not have any innovative or creative ability? It seems that these two contradict each other and cannot be combined, because the actions of one will eliminate the other (Ibid).

3. PATHOLOGY OF THE INVENTIVE STEP REQUIREMENT IN IRANIAN LAW

In addition to the above-mentioned damages, which naturally exist in Iran's law, Iran's patent system is also facing its own challenges in this field. This requirement has been made in the Patent Office of Iran, which is also strongly influenced by the inappropriate position and structure of the Patent Office. Based on this, we examine the defects of Iran's patent system in the form of legislative and executive pathology.

3.1. Legal Pathology

Article 2 of the law approved in 1386 states the requirements of patentable inventions. In this article, we read: "An invention that contains a new innovation and has industrial application can be registered. A new innovation is something that did not exist in the previous art or industry and is not obvious to a person of ordinary skill in the said art..." It seems that the legislator's intention with the term "new innovation" is with regard to its definition in the above-mentioned article, it is the requirement of the inventive step which is stated in the form of this unfamiliar phrasing, and this issue is the question of unification of the two requirements.

It has created newness and originality. While the TRIPS agreement states the separation of these two requirements, and the legal procedure of the countries

and regions under study also indicates their compliance with the context of TRIPS.

Therefore, with regard to paragraph one of Article 27 of the TRIPS agreement, which is an integral part of the World Trade Organization, and Iran is about to join it, and also with regard to the legal procedure of the countries under study in this field, and considering that the law approved in 2016 as an experiment has been approved for five years, it is up to the Iranian legislator to apply the necessary changes in the above-mentioned law to the Iranian legal procedure regarding the substantive requirements of patents, especially the basic requirement of the inventive step in the context of paragraph one of Article 27 of TRIPS, which has three requirements of novelty, inventive step and the industrial application has been stated by separating from each other, to be aligned.

Also, the phrase "having normal skill in the said art" which is stipulated in Article 2 of the Marqum Law, is ambiguous and cannot express a hypothetical entity to whom certain characteristics are attributed. Accordingly, at the end of the trial period of this law, it is suggested to change the phrase to "a person with ordinary skill in knowledge".

3.2. Executive Pathology

It is enough to state the advantages of the invention pre-testing system that "the purpose of evaluating inventions is to separate the wheat from the chaff" (Schuett, 2009, p. 1).

Based on this, the purpose of patenting is to select the desired innovations that lead to economic growth. But it seems that in Iran another goal is being pursued in this field, because the main guardian of our patent system is the Patent Office, which, unlike all advanced countries, is under the General Directorate of Land Registry and finally the judiciary. Examining the perspectives of the General Directorate of Deeds and Real Estate Registration shows that the tasks of this organization are based on the development of official registration in the country and the establishment and protection of the legitimate and legal rights and ownership of real and legal persons in order to promote the legal order and reduce lawsuits and maximum use of technology. The new forms are aimed at increasing the provision of registration services in an absent manner (Rek: Portal of the Organization of Documents and The country's real estate, available on the website: www.ssaa.ir) not industrial and economic development of the country through upgrading the level of technology.

Being in such a position has led to the existence of an inappropriate structure to evaluate the requirement of the inventive step. Unlike developed countries, which have a coherent organizational structure to evaluate the substantive requirements of patents, and by dividing matters into different units and assigning matters to experts under their supervision, they are responsible for evaluating the requirement of an inventive step in a favorable way, the structure of the Patent Office of Iran is very simple. It is elementary and the human resources present in this office do not have the necessary knowledge and expertise. In such a way that, according to the experts of the aforementioned office, any subject that is new can be registered. Now, if this issue is looked at in terms of the shortcomings in the search tools and databases of the patent office, its negative consequences are clearly visible; This means that the possibility of patenting patents without description of novelty is also very high.

Despite this, after the stipulation of the law approved in 2016 regarding form and substance assessment of inventions, efforts have been made in this field in the last few years, and it seems that the inventive step of inventions is also incompletely and ambiguously evaluated; Because the assessment of the inventive step requirement is done through inquiries from the academic units, which, due to the lack of familiarity of the specialists of the mentioned units with the patent literature, in many cases, the assessments are limited to ascertaining the possible novelty of the invention.

For example, an academic expert has stated in response to one of the Patent Office's inquiry letters that the claimed invention is approved from the aspect of being new and practical-industrial. The claimed invention in this case was a real-time biological particle detection system that detects suspended particles in the air using ultraviolet laser fluorescence spectroscopy. This device was used to detect air pollution. Some aspects of distinguishing the alleged invention from the previous art or industry were: 1- In principle, biological and airborne particles are difficult to identify, but in the alleged invention, due to the presence of existing sensors, the detection capability was high 2- Using the laser method and No use of substances chemical - as well as real-time detection - very high sensitivity of the detection system and high

accuracy of measurement - very low weight as well as the portability of the system - the ability to install in public places were the advantages of the claimed invention by the inventor (file number 994-1391 available in the registry office) invention).

It can be observed that despite the fact that the academic expert's reasoning for verifying the so-called new and industrial application of the invention is very similar to the analyzes that are used to evaluate the requirement of inventive step in other countries, but such similarity alone cannot be used to assess the correct and desirable requirement of inventive step in It became Iran. This issue is definitely caused by the lack of familiarity of the aforementioned specialists with the literature of patent law, and the correct assessment of the inventive step requirement requires that they learn the necessary training in this field. But in our opinion, the basic solution is that the assessment of the inventive step requirement is done centrally in the patent office and by experts under the supervision of this office, so that the assessment can be done in a more favorable way. The introduction of this matter is the restoration of the position and structure of the Patent Office. This department should be included in the organizational structure of the General Department of Registration of Foreign Property and Deeds and under the Ministry of Industry, Mining and Trade, which is responsible for the industrial and economic development of the country, and accordingly, a coherent structure should be defined for it so that it can achieve its main goal. The system of inventions, which is economic growth and development, should be implemented.

4. PROFFERED CRITERION

Based on the review of the above damages, military implementation similar to the copyright system (by applying the requirement of originality) and combining it with some parameters in the patent system is recommended in order to eliminate the mentioned defects. In this way, the inventor automatically owns the copyright by inventing a new subject and fulfilling the technical step (not the inventive step). This means that others will be prohibited from copying his invention without obtaining permission, and at this time the protection period of the previous invention will end. The recent feature of the proposed criterion, which is specific to the system of patents, does not allow the validity of obvious patents to remain valid for a long time (Dumbraveanu, op.cit, pp. 51-52).

According to the authors, the above criterion seems to be very appropriate, especially for Iranian law, considering the state of the Iranian patent system and the future prediction of this issue.

5. CONCLUSION AND SUGGESTIONS

The common perception is that the system of inventions is always useful and brings economic growth and development. Perhaps in the legal doctrine, this notion is correct because the basis of the patent system is defined as the production of innovation and ultimately economic growth and development and the improvement of public welfare, but in practice, this does not happen in many cases, and on the contrary, the patent system may stop the production of innovation. and economic growth. The pathology of the inventive step requirement, which as the heart of the patent system plays the most important role in the realization of the basis of the patent system, proves the above claim. The economic analyzes of the requirement of the inventive step that were expressed in the form of the above four views, each of them implied shortcomings and inefficiencies, some of which were clearly in conflict with the goals of the patent system. On the other hand, examining the challenges in the assessment section of this requirement also strengthened the assumption of abandoning this requirement and using another criterion in patent registration. A criterion that, despite the use of some parameters of the patent system, is similar to the verification of originality in copyright and does not follow the negative consequences of the requirement of an inventive step in the assessment section.

The examination of Iran's patent system also indicated that in addition to the general vulnerability of the inventive step requirement in Iran, the way this requirement is expressed in the patent law of 2016 and its assessment in the patent office is facing major problems. Improper legislation has led to the inappropriate position and structure of the patent office, and the patent office is therefore not able to correctly evaluate the requirement of the inventive step. In fact, in our opinion, the system of inventions in Iran not only cannot lead to economic growth and development, but considering the described requirements, it cannot be defined as a mission other than delaying economic growth and development.

Regarding the above issues, we express our suggestions below in the form of general and specific suggestions for Iranian law:

A. General Proposals

1- Military actions similar to the copyright system by observing the special requirements of the patent system to register innovations

This proposal has been sufficiently explained.

2- Promotion of Patent System for the Inventive Step Assessment

In order to deal with the issue of personal bias in the assessments, two examiners should be used to review and comment; In this way, the first evaluator makes a decision about the alleged problem and the level of skill attributed to a person with ordinary skill in knowledge, and the second evaluator, without knowing about other issues, gives a vote solely based on the first evaluator's decision regarding whether the claimed invention is obvious or not.

3- Improving inventive step requirement assessment tools

Coordination of capabilities attributed to a person with ordinary skill in knowledge and precise explanation of the said person's skill level by patent offices and the doctrine of patent rights in order to evaluate the inventive step requirement as much as possible.

B. Proposals Specific to Iran's Patent System

1- Legislative Proposals

First- Amending Article 2 of the Law of 2016 as follows: "A subject can be registered as an invention that is at least new, contains an inventive step and industrial application.

Note 1: An invention contains an inventive step that is not obvious to a person with ordinary skills in terms of previous technology or industry.

Second- changing the phrase "having normal skill in the mentioned art" contained in Article 2 of the law of 2016 to the phrase "a person with normal skill in knowledge".

2- Executive Proposals

First- changing the location and restoring the structure of the Patent Office; This department should be placed under the Ministry of Industry, Mining and Trade and then a coherent structure should be defined for it.

Second - updating the databases of the patent office and connecting to important information sources in the world, in order to correctly evaluate the requirement of inventive step and of course novelty.

Third- Training of patent assessment specialists to work centrally under the supervision of the Patent Office.

4th- According to the current requirements of the assessment of the requirement of the inventive step that takes place through inquiry, the establishment of an institution under the supervision of the patent office, called the Academy of Intellectual Property, to provide the necessary training to university specialists, by experienced professors of intellectual property law.

Fifth- In case of applying the correct pre-testing system, considering the situation of Iran, it is recommended that in the technologies that have more capabilities in our country, a higher level of skill should be considered for a person with ordinary skill in knowledge in order to produce innovation, and in technologies that lack such We are capable, the level of said skill will be lowered.

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REFERENCES

Persian

Jafarzadeh, Mirqasem and Mahmoudi, Asghar, (2004), substantive requirements of patent protection from the point of view of judicial procedure and patent administration, legal research, 44, Tehran.

----------, (2006), International Patent System: Fields and Necessities, Legal Research, 44, Tehran.

Sadeghi-Moghadam, Mohammad Hassan, Ghafarifarsani, Behnam, (2013), Spirit of competition law (comparative study on the objectives of competition law), Judicial Law Journal, 73, Tehran.

Najafi, Hamed, (1390) Comparative study of the substantive requirement of the inventive step in invention, Master's thesis, University of Qom.

Aoki, Reiko and Spiegel, yossi,(1999), Public disclosure of patent applications R and D, and welfare, The BerglasSchool of Economics. https://doi.org/10.2139/ssrn.146414

Bernstein DM, Atance C, Meltzoff AN, Loftus GR,(2007), Hindsight bias and developing theories of mind, Child Development, Volume 78, Number 4. https://doi.org/10.1111/j.1467-8624.2007.01071.x

Bessen, James and maskin, Eric (2006), Sequential innovation, patents and imitation, Boston University School of Law and Research on Innovation. Available at: *www.researchoninnovation.org*,Last Visited At: 1390/10/12.

Denicolo, vincenzo and Halmenschlager, Christine, (2009), Optimal patentability requirements with fragmented property Rights, USA. https://doi.org/10.2139/ssrn.1510102

Denicolo, Vincenzo and zanchettin, piercorlo,(2002), How should forward patent protection be provided? international journal of Industrial organization, 20, USA. https://doi.org/10.1016/S0167-7187(01)00080-7

Denicolo, Vincenzo,(2008), Economic theories of the nonobviousness requirement for patentability: A Survey, Lewis and Clark law review, Vol. 12:2, USA. Available at: law.lclark.edu, Last Visited At: 1390/10/6.

Doug Lichtman & Mark Lemley, (2007), Rethinking Patent Law's Presumption of Validity, 60 STAN. L. REV. Available at: papers.ssrn.com, Last Visited At: 1390/8/15.

Dumbraveanu, Radu, (2009), Assessment of inventive step, faculty of law, Lund University. Available at: Lup.lub.lu.se, Last Visited At: 1390/10/7.

Eisenberg, Rebecca S, (2004) Obvious to whom? Evaluating Inventions from the Perspective of PHOSITA, Berkeley Technology Law Journal, Vol. 19:885. Available at: Btlj.org/data/articles, Last Visited At: 1390/9/17.

Encaoua, David, Guellec, Dominique, Mart´ınez, Catalina, (2006), Patent systems for encouraging innovation: Lessons from economic analysis, Research Policy, no. 35, Elsevier. https://doi.org/10.1016/j.respol.2006.07.004

Erkl, Nisvan and Scotchmer, Suzanne,(2007), scarcity of ideas and options to invest in Rand D", California, competition policy center, institute of business and economic research, uc Berkeley. Available at: www.asb.unsw.edu.au, Last Visited At:1390/10/11.

Heller .A .Michael. And Eisenberg, Rebecca S.,(1998), Can patents deter innovation? The Anticommunist in biomedical research Science, American Association for the Advancement of Science, SCIENCE, vol. 280. https://doi.org/10.1126/science.280.5364.698

Hunt M. Robert,(2004), Patentability, industry structure, and innovation, the journal of industrial economics, No. 3, Philadelphia. https://doi.org/10.1111/j.0022-1821.2004.00232.x

Idermark, Michael, (2009),Patentability in the Post-Genomic Era, Master of Laws thesis, 30 ECTS credits, Stockholm University,Department of Law. Available at: www.juridicum.su.se,Last Visited At: 1390/9/19.

Kou, Zonglai 'Rey, Patrick Wang, Tong, (2010), Nonobviousnessand Screening. Available at: papers.ssrn.com, Last Visited At: 1390/8.16.

Kunin Stephen g. and Signore Philippe J .C, (2008), A Comparative Analysis of the Inventive Step Standard in the European and Japanese Patent Offices from a Us Perspective,Ip Ltigator. Available at: Aspi.asso.fr, Last Visited At: 1391/8/25.

Mandel N Gregory, (2008), another missed opportunity: the supreme courts failure to define nonobviousness or combat hindsight bias in ksr v Teleflex, Lewis and Clark law review, vol.12:2, USA. Available at: Papers.ssrn.com, Last Visited At: 1390/9/18.

---------- (2008), how The non – obvious problem: how the indeterminate Nonobviousness standard produces excessive patent grant, university of California, Davis, vol, 4: 57. Available at: Papers.ssrn.com, Last Visited At: 1390/9/19.

---------- (2007) Patently Non-Obvious II: Exprimental Study On The Hindsight Issue Before The Supreme Court In Ksr V. Telefelex, Yale Journal OF Law &Technology. Available at: Papers.ssrn.com, Last Visited At: 1390/10/6.

Meniere, Yann, (2004), Non obviousness and complementary innovation, Cerna- Ecole NationaleSupérieure des Mines de Paris. Available at: Www.cerna.ensmp.fr, Last Visited At: 1390/8/19.

Schuett, Florian,(2009), inventors and impostors: an economic analysis of patent examination, European university institute. Available at: ideas.repec.org, Last Visited At: 1390/10.25.

Scotchmer, S. (1991).Standing on the shoulders of giants: Cumulative research and the patent law. Journal of Economic Perspectives. https://doi.org/10.2307/2555499

Scotchmer, S., & Green, J. (1990). Novelty and disclosure in patent law. RAND Journal of Economics Vol. 2 1, No. I Available at: www.people.hbs.edu last Visited At:1391/8/26.

Stuart Minor Benjamin & Arti Rai, (2007), who's Afraid of the APA? What the Patent System Can Learn from Administrative Law,

95 GEO. L.J. 269.RAND Journal of Economics. Available at: Papers.ssrn.com, Last Visited At: 1390/10.28.

Wipo, (2001) The Japanese patent Examination and Training System.GE SHU, Available at: Www.wipo.int ,Last Visited At:1390/11/19.

Wipo, (2008), WIPO Intellectual Property Handbook: Policy, Law and Use, Geneva, wipo publishing. Available at: Www.wipo.int, Last Visited At: 1390/10/12.

www.ssaa.ir

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