

Analysis and discussion on the characteristics and current situation of patent assets appraisal in China

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Abstract: With the introduction of the national innovation-driven strategy, mass entrepreneurship and innovation have been popular. In recent years, the quantity of China's patent assets have increased rapidly, and activities related to patent assets such as transaction, investment, pledge loan, securitization financing, litigation and service management have gradually increased, which undoubtedly expands the market of patent assets evaluation industry. However, China's asset appraisal industry started late, the development is not mature. Based on the characteristics of China's patent asset appraisal market, the problems of the patent assets appraisal industry in China are gradually exposed, such as the lack of standardization, the low professional quality of the appraisers, and the improper application of the appraisal methods, which reduce the accuracy of the patent asset appraisal value and make the patent assets appraisal industry become formalistic. In view of the problems existing in the current patent assets evaluation, this paper puts forward some constructive suggestions, such as enacting relevant regulations and policies, regularly assessing professionals, consulting patent experts, etc. We hope to achieve the purpose of invigorating the patent evaluation industry and enhancing the credibility of the evaluation results.

1. Introduction

Under the social development background of striving to build an innovative country, China's patent market is booming. By the end of 2018, China had become the country with the largest number of patent applications in the world. At the same time, patent assets evaluation has become an indispensable part of regulating and managing patent assets. However, due to the late start and lack of experience, China's patent asset evaluation market presents a contradiction between the rapid development of patent asset market and the immature patent assets evaluation system. Based on the characteristics of Chinese patent assets appraisal, this paper discusses and analyzes the current situation of Chinese patent assets appraisal, and puts forward some Suggestions on the existing problems.

2. Patent assets and patent assets assessment

Patent right refers to the general term of exclusive use right, transfer right, license right and other rights granted by law. There are three kinds of patents: invention patent, utility model patent and design patent. A patent is called a patent asset when the following three conditions are met simultaneously. First, the patent can continue to play a role. Second, the patent can bring economic benefits to the patent owners. Third, the profitability of the patent is in line with the scope of legal protection.

Appraisal of patent assets refers to the process of evaluating and estimating the value of patent assets, and issuing appraisal report. This estimation is based on the fact that the patent assets actually exist, comply with the legal requirements, and can bring continuous benefits. The patent assets assessment process is shown in the figure below:

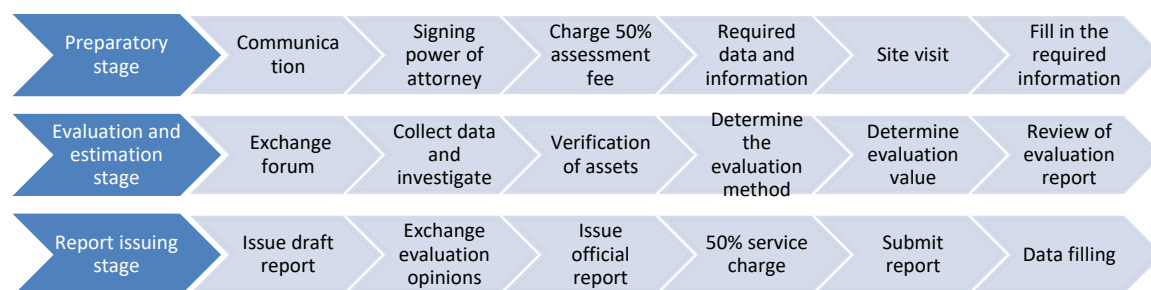


Fig. 1 Flow chart of patent assets evaluation in China

3. The importance of patent assets evaluation today

In recent years, the number of patent assets in China has increased significantly, and the utilization of patent assets has gradually diversified. Various relatively new utilization methods, such as securitization of patent assets, pledge loans of patent assets, are active in the Chinese patent assets market. This phenomenon leads to the rapid increase of market demand for patent assets evaluation. Patent asset appraisal plays an increasingly important role in China's patent market. The importance of patent assets evaluation is summarized as follows:

Patent assets evaluation is beneficial to standardize the increasingly prosperous patent assets market, and make patent assets transaction and management orderly and efficiently.

In the transaction of patent assets, the evaluation of patent assets can provide pricing basis for the transaction of patent assets, facilitate the transaction to proceed smoothly and orderly, and better maintain and coordinate the interests of both parties in the transaction of patent assets. The smooth transaction of patent assets is conducive to the optimal allocation of patent resources.

In the management of patent assets, patent assets evaluation can strengthen the management and control of enterprise and country patent assets, avoid the loss of patent assets, and realize the value preservation and appreciation of patent assets as far as possible, so as to better protect the interests of patent assets owners and operators.

4. Characteristics of Chinese patent asset assessment

4.1. Unique characteristics of patent assets appraisal in China.

In the evaluation of patent assets, the principle of "first application" is adopted in the recognition of patent assets. The patent application right can be transferred under certain conditions, and national treatment will be given to foreigners on the basis of reciprocity. The United States and the Philippines adopt the "first invention principle" for patent recognition. The United States does not allow the transfer of patent application rights. Countries such as the United States and the United Kingdom unconditionally allow foreigners and their own people to enjoy the same treatment.

4.2. The purpose of patent assets evaluation in China is relatively narrow.

China's patent assets evaluation is mainly for the purpose of transaction, while western developed countries have diversified evaluation purposes. This phenomenon is related to the late start and imperfect development of China's asset appraisal industry. We should learn from the experience of developed countries in asset evaluation, develop patent asset evaluation for other purposes, such as professional litigation and service management, improve the domestic asset evaluation market, and keep in line with the developed world level.

4.3. Lack of general experience in patent assets appraisal industry in China.

China's patent assets appraisal originated in the late 1980s and early 1990s, with a history of only 20 to 30 years. Compared with the experience of western countries in the past hundred years, China's asset appraisal industry does not have the support of huge case data, which makes China's appraisal system and method imperfect, and the selection of appraisal parameters is ambiguous. Therefore, we should learn from the evaluation experience of developed countries, establish and improve our own evaluation system, and enhance the accuracy and credibility of the evaluation conclusion.

4.4. The market potential of China's patent assets evaluation industry is huge.

In the past three decades, with the steady development of China's economy and the government's incentive policies for invention creation, by the end of 2018, the number of patent applications has leapt from zero reserves more than 30 years ago, to the most patent application quantity in the world at present. The number of patent applications in China accounts for 46.4% of the global total, followed by the United States, Japan and South Korea. It is approximately equal to the sum of applications from the second to the eleventh countries. The growth of patent applications means the increase of the demand for patent assets evaluation, which also means that the market potential of patent assets evaluation is huge. The comparison of patent applications of various countries in 2018 is as follows:

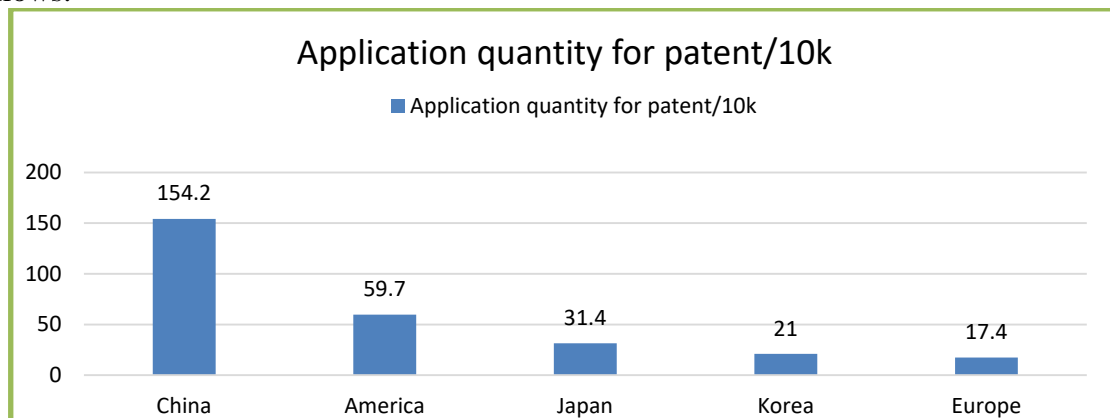


Fig. 2 Patent application quantity ranking map of various countries

China's patent assets evaluation system is not complete.

China's assets appraisal industry started late, and patent assets have gradually increased in recent years. In the process of patent assets appraisal, there are some problems, such as insufficient evaluation experience, incomplete evaluation methods and disordered management, etc, forming a phenomenon that theoretical methods and legal system cannot keep up with the trend of practical development. For example, the chaos of patent assets evaluation management leads to the formality of patent assets evaluation and most of the evaluated valuation of patent assets is not fair and just. The asset appraisers do not have a deep understanding of the patent technology and cannot make an objective and fair valuation of the patent assets.

5. Existing problems with patent assets assessment at present

5.1. The professional quality of patent assets appraisers is not high enough

(1) The object of patent assets evaluation is not clearly defined.

The appraisal object of patent assets refers to the rights and interests of patent assets, including the right of use, the right of income and the right of disposition. In our country, we mainly use the income method to evaluate the patent assets, and the income comes from the profit brought by patent' rights. However, if the appraisal object is not identified clearly, it is easy to add other values such as product value, professional technology field value and so on to the appraisal of patent assets,

expand the scope of the appraisal object, and make the value of patent assets overestimate. For example, to evaluate a software patent asset for improving computer functions, the appraisers use the income method to evaluate the value of the patent asset, combining with the sales revenue and cost of computers with innovative functions, to determine the amount of profit, and finally get the value of the patent asset. In this case, the value of the patent assets should be the software license income obtained by software licensing to computer manufacturers, which belongs to the right to allow others to use, that is, the income right. In this case, the evaluation object is not clearly defined, which makes the evaluation object add computer assets and expand the scope of the evaluation object. The value of computer assets is added to the final evaluation value, which makes the final value overestimated.

(2) Know relatively little about patent expertise

The personnel of the assets appraisal institution are not specialized in the research of patent asset technology. In the face of hundreds of patent assets, it is difficult to analyze the patent technology knowledge contained in them one by one. Evaluators nearly cannot evaluate the value of patent assets according to the novelty and practicability of patent assets thoroughly, and to explain the fundamental source of the evaluation value, so that the evaluation results are not convincing. Moreover, the basis of income method is mostly the excess income created by relevant patent assets in the market. The professional knowledge of the appraisers is insufficient. When determining the expected future earnings, the appraisers attach importance to the current value of the patent and ignore its long-term value, which makes the expectation of future earnings inaccurate. As a result, the patent assets are overvalued or undervalued, which makes the evaluation result not convincing. This is one of the reasons why many patent assets evaluation results can not be convinced by the intellectual property industry.

(3) In practice, the factors affecting the value of patent assets are not considered comprehensively and thoroughly

When using the income method to evaluate assets, the factors that affect the value of assets, such as the structure of patent claims, the stability of rights, the development prospect of patented products, etc., are restricted by current factors and may not be fully reflected in the expected income. Therefore, it is better to analyze and judge the important influencing factors one by one in the evaluation, which is often ignored in practice, resulting in inaccurate prediction results. For example, for the development prospect of patented products, it is obviously not enough to reflect only through the expected earnings. Through the past and expected market analysis of the current patent product market, horizontal comparative analysis of similar products, etc., on the basis of the detailed forecast of the future trend, we can analyze the development prospect of patent products, then quantify the income, and better use the income method to achieve the purpose of accurate evaluation results.

5.2. The selection and application of patent assets evaluation method is not reasonable

(1) The selection of evaluation parameters is random.

Under the condition that market method and cost method cannot be widely used, income method has become the mainstream method of patent evaluation. However, there are some complexities and difficulties in the determination and selection of evaluation parameters. Due to the lack of deep understanding of patent professional knowledge of practitioners, there is no unified standard in China, which greatly increases the randomness of appraisers in the selection of evaluation parameters. However, the evaluation value is very sensitive to the selection of parameters. A small difference can lead to a difference of several times or even more in the final result, which makes the final evaluation result inaccurate. For example, for a specific asset, the accurate determination of the return on investment or discount rate is more complex. There are many factors that need to be considered. At the same time, they need to be corrected in time according to the changes of the factors. In this way, the preparation work is very complicated. In practice, appraisers sometimes choose to estimate the parameters generally rather than accurately in order to avoid heavy workload, or due to the lack of professional knowledge reserve. After expanding the effect, the evaluation

results are not accurate enough.

(2) The conformity psychology of income method.

According to China's assets evaluation law, patent assets evaluation methods include cost method, market method and income method. In the practice of patent assets evaluation, the income method is most widely used. Due to the lack of professional knowledge reserve or the weak sense of professional ethics, the appraisers can use the patent assets of market method, but also use the income method to evaluate. Sometimes, the workload of evaluation will be increased, and the accuracy and efficiency of evaluation will be reduced. This phenomenon undoubtedly challenges the choice of evaluation methods.

5.3. The legal relationship of patent assets is not clear enough

When evaluating patent assets, we should make clear and analyze the legal relationship of patent assets, determine the scope of patent rights through right-claiming document, clarify the object of patent protection, protection period and other relevant rights according to relevant legal documents. The appraisers should evaluate according to the legal relationship determined by the relevant laws, Otherwise, it is easy to cause the false value of assessment due to unclear identification of the scope of patent rights, inaccurate identification of the duration of protection and other reasons. In today's appraisal practice, many appraisal institutions do not analyze the legal relationship of patent assets, but focus on analyzing the technical characteristics of patent assets or the characteristics of patent products. If the evaluated characteristics are not within the scope of legal protection, it can be said that this appraisal is not accurate. In addition, appraisers should strengthen the verification of the scope of rights. In reality, patent owners think that the scope of protection of patent assets they have obtained is often inconsistent with the scope of legal protection. If necessary, the assistance of relevant technical experts can be requested.

5.4. There is no strict operation standard for patent assets evaluation

In China, patent assets are defined and evaluated according to patent law and China's assets appraisal law. However, the existing laws only stipulate the definition and methods of patent assets evaluation, and there are no strict regulations on the detailed standards of patent assets evaluation, such as the selection of evaluation parameters, the degree of patent knowledge of patent evaluators, etc. In addition, the characteristics of patent assets themselves make it more difficult to evaluate patent assets. The malpractice of patent assets evaluation easily leads to that patent assets evaluation is just a formality and ignores the value of patent assets evaluation. Therefore, it is urgent to standardize the technology, method and standard of patent assets evaluation.

6. Suggestions on patent assets appraisal activities

6.1. Conduct regular patent asset professional knowledge test for patent evaluators

Patent asset appraisers should be periodic tested by their institution on professional knowledge which includes practice part and theory part. These knowledge should be updated timely, and be tightly tied with current policies and practices. At the same time, A fair and impartial assessment and reward system ought to be established. These measures will motivate employees to improve their comprehensive professional quality consciously.

6.2. Seek the help of relevant experts to conduct patent asset innovative analysis

The innovation of patent assets is the premise of the existence of patent assets and the source of its value. The lack of innovation analysis of patent assets will reduce the credibility of the assessment results. Therefore, when evaluating professional assets, we can ask relevant experts to make a innovative analysis report of patent assets, including the analysis and prediction of the industry status and potential of patent assets. This analysis can enable the appraisers to consider the factors affecting patent value more thoroughly, and enhance the accuracy and persuasiveness of the evaluation results.

6.3. Enhance the reliability of parameter selection and the innovation of evaluation methods.

By analyzing the historical transaction data of domestic and foreign countries, the evaluation agency can establish the parameter reference system under different patent transaction background, so that the evaluators can select more appropriate parameters in patent evaluation. At the same time, we should strengthen the innovation of evaluation methods and use more advanced methods to enhance the accuracy of evaluation results.

6.4. Strengthen the attention of relevant laws on patent asset.

Patent assets evaluation is the appraisal of relevant rights and interests stipulated by law. By paying more attention to the related laws of patent assets, we can make clear its evaluation conditions, such as evaluation scope, evaluation period and so on, so as to make the valuation of patent assets accurate and reliable. Therefore, the patent asset appraisers in China should pay more attention to the related laws of asset appraisal, make sure that the appraisal process and conclusion have laws to follow, which can enhance the appraisers' sense of responsibility for the appraisal conclusion, and improve the quality of evaluation.

6.5. Develop unified patent assets appraisal standard

Nowadays, there is no specific unified standard in the evaluation procedure and parameter selection of patent assets appraisal, which is one of the main reasons that the patent assets appraisal industry becomes formalistic. Specific unified evaluation criteria need to be formulated urgently.

7. Conclusion

With the rapid development of patent market in China, patent assets evaluation plays an important role in the management and transaction of patent assets. Analyzing and discussing the characteristics and current situation of patent assets evaluation in China will help us to understand its importance and existing problems, and then put forward innovative solutions, so as to standardize the patent assets evaluation industry effectively, and enhance the credibility of patent assets evaluation.

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