

# Intellectual Property Development Transformations in Chinese Societies

Shi Zhang, China University of Political Science and Law, China\*

## ABSTRACT

This article analyzes the current situation of China's intellectual property rights by analyzing the legislation and revision of China's intellectual property law; the development stages of China's intellectual property rights by analyzing the time of intellectual property law; and to take theoretical system of intellectual property rights with Chinese characteristics as development goal, set the statistical standards, and analyze Chinese intellectual property development deficiencies. The conclusion is that the directions of intellectual property transformation in China are ontology and culture.

## KEYWORDS

Chinese Societies, Intellectual Property, Transformation

## OVERVIEW

Intellectual property law in this paper includes patent law, trademark law, copyright law, new plant varieties protection law and integrated circuit protection law; This article does not consider any other intellectual property rights without legislation in China.

This paper finds:

1. The stage of intellectual property development base on legislation time;
2. The disparity between intellectual property in every stage and its ideal state;
3. Reasons and background of every intellectual property law.

Social and practical implications:

1. The legislation of intellectual property law to legislation government department;
2. Development of intellectual property in China.

## RESEARCH PURPOSE AND METHOD

The purpose of this paper is to determine the characteristics of the intellectual property reform stage by analyzing the development of intellectual property law and through the characteristics of

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\*Corresponding Author

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the intellectual property reform stage to identify the disparity between intellectual property in every stage and its ideal state.

Reference research method refers to reading of legal documents, and recording index which is according with theoretical system of intellectual property rights with Chinese characteristics.

Systematic research method refers to taking the theoretical system of intellectual property rights with Chinese characteristics as goal, then analyze of the deficiencies in every stage of intellectual property development transformations.

Through the above two kinds of analysis, this article has two significance:

1. To understand the development stage of intellectual property transformations, especially in the legislative stage of development;
2. To understand the deficiencies between every stage and entire of intellectual property development transformations and development goal.

## **SOCIAL FUNCTION OF INTELLECTUAL PROPERTY IN CHINA**

In the socialist society with Chinese characteristics, because of China's intellectual property rights are in the development stage, China's intellectual property rights in the society has the following functions:

First, the basic role of intellectual property rights are in the allocation of resources. After twentieth century, science and technology has gradually become a mainstay of the national economy, science and technology and the application of knowledge plays a decisive role in the development of the society. At present, knowledge and technology product are kinds of rare resource and production factor, only have clear property information knowledge and technology to participate in market transactions, if blindly trading, the value of the products and the degree of scarcity cannot be reflected by the price information. Such as the activities of Microsoft and global intellectual property organizational formations produce difference and sameness in governable ways. Therefore, if the price signal is the indicator of the optimal allocation of resources, then the intellectual property rights is the carrier of the price, and the intellectual property right form the price system and could make it full use of the function (Philip, 2005).

Second, intellectual property is the regulator of personal interests and social interests. In the rapid economic development of modern society, people are mainly based on the social recognition of their products to judge the creativity of designers or creators. The application of intellectual property right is also particularly strict operational process, which can ensure that the designer or inventor of the results of scientific and social benefits, but also means that the acceptance of its products in society (Penner Mark, 2008).

Third, intellectual property rights have the functions of promoting and regulating competition. Intellectual property products do not need to repeat the production. Therefore, the third party in the intellectual property system under the conditions of monopoly must go through the following two options, one is to take the road of independent development of new technologies; the two is to pay the cost of the development of technology (Ruse-Khan, 2010).

Fourth, the intellectual property rights have innovative and incentive function. The innovation of the incentive function of intellectual property rights refers to the definition and protection of rights by the given innovator of intellectual products within a certain period of time to enjoy the rights of personal rights, can clear the innovation investment return period, the incentive function is through improved technology to improve the market competition ability.

Fifth, intellectual property is an important means of protection of traditional knowledge. The law protects the knowledge and creative ideas by giving patents, trademarks and copyrights, If the infringement of intellectual property rights need to be punished.

## GOVERNMENT INFORMATION SYSTEM IN INTELLECTUAL PROPERTY

### Patent Information System

There are five patent information service system in SIPO: Patent electronic application system; Patent retrieval analysis system; Patent examination information query system; Patent publication and announcement system; Patent data service system (Li-zhi, 2006).

Patent electronic application system link is <http://www.cponline.gov.cn/>. Patent electronic application system was officially opened in March 2004. New electronic application system was on-line operation in February 10, 2010. Electronic application system works in 365 days \*24 hours, including national day, new year's day, Spring Festival and other holidays. The applicant register and get user and password.

1. Log on the website, download and install digital certificates and client software;
2. Network configuration for client and upgrade programs;
3. Making and editing electronic application documents;
4. Sign electronic application documents using digital certificates;
5. Submission of electronic application documents;
6. Receive electronic receipt;
7. After submitting the application, you can log in at any time to search for electronic application related information;
8. Receive notification, submit intermediate documents.

Patent retrieval analysis system link is <http://www.pss-system.gov.cn/>. The retrieval functions include routine search, table search, special topic retrieval, search history, search result browsing, document browsing, batch download, etc. The analysis functions include rapid analysis, custom analysis, advanced analysis, analysis report, etc. Data range: includes 103 countries, regions and organizations of patent data, as well as citation, family, legal status and other data. Chinese and foreign patent data, updated every Wednesday; family, legal status data, updated every Tuesday, citation data updated monthly (Yong & Liu, 2014).

Patent examination information query system link is <http://cpquery.sipo.gov.cn/>. Chinese patent examination information query is a network query system to meet the needs of the applicant, the patent holder, the agency and the public. Users are divided into registered users and ordinary users. Registered users: refers to the electronic application for registration of users, you can use the electronic application registration name and password log in, query all patent applications related information in the registered user name. Multi-Country invention patent examination information query services can be found in State Intellectual Property Office of the PRC, the European Patent Office, the Japanese Patent Office, South Korea patent office, the United States Patent and Trademark Office to accept the patent examination information

Patent publication and announcement system link is <http://epub.sipo.gov.cn/>. Included information of China patent announcement, the substantive examination, patent termination and patent transfer, from September 10, 1985 to the present, searching according to the invention publication, invention authorization, utility model and design, four kinds of announcement data, updates every Wednesday (Yi et al., 2012).

Patent data service system link is <http://patdata.sipo.gov.cn/>. In order to expand the scope of intellectual property based information resources sharing, satisfy the public demand access to domestic and foreign patent data, the SIPO established the patent data service system on December 10, 2014, for the public to provide domestic and international patent based FTP data download service.

### Other Information Systems

There are two information system in trademark office of PRC, trademark inquiries and online applications.

The trademark inquiry system was updated in May 11, 2015. It includes six modules: trademark approximate inquiry, trademark comprehensive inquiry, trademark status inquiry, trademark announcement inquiry, error information feedback and commodity service item. Trademark approximate inquiry refers to according with the graphic, character and other trademark elements to provide an approximate retrieval function, users can search for the same or similar products on the same or similar trademarks; trademark comprehensive inquiry refers to the user may inquire about the relevant information of a trademark in accordance with the trademark number, trademark, applicant name and so on; trademark status inquiry refers to the user may inquire about the status of the trademark application according to the trademark application number and the register number. Online application system refers to application trademark online.

There are three information system in copyright protection center of China. The software register system refers to online register software. The work register system refers to online register works. The DCI register system refers to online register DCI.

Layout-design of integrated circuits online application link is <http://vlsi.sipo.gov.cn/home.action>. Layout-design of integrated circuits online application refers to users can apply online integrated circuit layout design by registering user name and password.

New plant species of the Ministry of Agriculture online application link is <http://www.online.cnvpv.cn/>. New plant species of the Ministry of Agriculture online application refers to online application new plant species.

## **The Function of Intellectual Property Information System in Society**

### *Aided Analysis*

When members of the society make decisions about production, management and other activities, they need a variety of data as the basis. Under the artificial data processing mode, only regular reports can be provided, and it is difficult to provide comprehensive analysis data according to the requirements, so that decision-making activities can only rely on experience, and tend to be blind. This mode of operation is a kind of low level operation, will cause a lot of waste, and the data will be organized by the computer system, can provide all the data at any time, to ensure the accurate and timely decision-making (Chang et al., 2015).

### *Standardized Management*

The social organization in many data management is not as strict as financial management system, often with great randomness, data acquisition time, format and method of calculation is often based on experience and formula, but it is not convenient for audit, easy to cause confusion and error. The computer system can provide a clear scale for data processing to standardize it.

### *Save Manpower*

we can reduce labor intensity, by not only many repeated calculations can be processed by a computer, but also in the input data is more important, all the processing done by the computer system, can avoid the manual processing in the middle reach of attrition effect.

### *Promote the Perfection of Management System*

In the process of establishing information management system, with the function, organization structure adjustment, optimization and management depth increase, each link between institutions becomes more and more complex, in order to make the mechanism organically, rely on responsibility for a set of established complete management system. The perfect management system provides a reliable guarantee for the collection, processing, and transmission of information. It can make the important resource of information play a full role in management (Junzo, 2006).

### *Improve Work Efficiency*

The establishment of information system makes the connection between departments more closely, and greatly accelerates the degree of business management, thus laying a good foundation for improving work efficiency.

### *Promote the Quality of Managers*

The main force of the construction of information system is the manager. Managers do not understand the basic knowledge of the information management system, so they cannot build the information system. Therefore, in the construction of information systems, to ensure the smooth progress of construction work, personnel training must be carried out simultaneously to further improve the quality of managers.

## **ANALYSIS OF INTELLECTUAL PROPERTY LAW EVERY REVERSION IN CHINA**

### **Chinese Patent Law**

Chinese patent law advocater is foreign economic management department in China. China's International Trade Promotion Association put forward the feasibility of the patent system in 1971. In a report by the Communist Party of China in 1978, it is clear that China should establish a patent system. China signed the trade agreement in 1979 and became a member of the world intellectual property in 1980, and then the birth of patent law was in 1984. The patent law of 1984 played a positive and important role in encouraging invention and creation, promoting scientific and technological progress and economic development, as well as foreign scientific and technological exchanges and economic and trade exchanges (Liu, 2006).

**First Revision Background:** On the one hand, due to the lack of practical experience in the development of the patent law, some defects and shortcomings was in the patent law implementation process. On the other hand, in order to fulfill our obligations of foreign commitments, it make China's patent protection level to accord with international standards (Tang et al., 2011).

**First Revision Process:** Preparations for amendment of patent law begin in 1988, China Patent Office submitted the patent draft law to the State Council in 1989, 1991 and 1992 for the three time, passed by 27 times meeting Standing Committee of the National People's Congress in 7<sup>th</sup> session, implemented in January 1, 1993 (Chang et al., 2008).

The first amendment of Chinese patent law:

1. Expand the scope of patent protection  
Patents on "drugs and substances from chemical methods" and "food, beverage and condiment" products may be granted.  
About increasing drugs and substances from chemical methods reasons are mainly national inner factor and international outer factor. China has rich traditional Chinese medicine resources, has a long history of using Chinese medicine to prevent disease, a systematic theory and experience of traditional Chinese medicine; Drug patent protection could encourage drug from traditional Chinese medicine and replace part of western medicine resource which will play our traditional advantages and enhance the competition ability in the international market of Chinese Medicine (Li et al., 2011).  
About increasing food, beverage and condiment reason is mainly national inner factor. First, China has its own unique food culture, many Chinese food, drinks and condiments are competitive in the international market; Second, New food, beverage and condiments products are an new replacement alternative to the original products; Last, There are very few patent applications for food, beverage and condiment in China.
2. Extension of the patent right period  
The period of invention patent is twenty years; The period of utility model is eight years; The period of design is ten years.

These reasons are mainly national inner factor and international outer factor. Some technical areas of invention spend a long time and more cost of development and research; This could be coordinated with some international conventions.

3. The protection of imported and patented products  
This reason is mainly international outer factor on imported and patented products as a content of patent law protection in most country. This could be coordinated with some international conventions.
4. Products obtained directly by patented method  
This reason is mainly international outer factor on products obtained directly by patented method as a content of patent law protection in most country. This could be coordinated with some international conventions.
5. Reenact conditions for compulsory licensing of patents  
The patent office may grant a compulsory license to exploit the patent for invention or utility model in emergency, other urgent situation, the public interest, or in order to prevent the abuse of patent right. This could be coordinated with some international conventions.
6. Setting national priority  
The applicant may apply the same invention or utility model within twelve months from the date of the first patent application. This could be coordinated with some international conventions.
7. Changing the objection procedure before authorization to the administrative revocation procedure after authorization.

Second revision background: Some of the provisions of the patent law of 1992 do not adapt to the spirit of state-owned enterprise reform and government reform; The reality requires further perfection of patent protection system; Patent approval and patent dispute processing cycle is too long, which affects the patent applicant and patent holder protection in time; China has joined the Patent Cooperation Treaty.

The second amendment of Chinese patent law:

1. Amending the relevant provisions on the spirit of enterprise management system
  - a. The patent application right belongs to the enterprise for the execution of the work invention, which is carried out by the enterprise, or mainly by the enterprise material conditions
  - b. When patent right is transferred, the parties concerned must have a written contract.
  - c. Chinese enterprise or individual patents which are of great significance to the national interests or the public interests, approved by the State Council, could be applied in the approved scope, implementer pay royalties to the patentee according to the provisions
2. Further improve the patent protection system
  - a. Increasing without permission of the patent holder, others shall not offering for sale its patented products
  - b. The patent infringement disputes may be handled by the administrative the provincial patent management departments.
  - c. Increasing the period action on patent using fee from publication to granted
  - d. The patent owner of the utility model may request the patent office to make a search report
  - e. Increasing calculation method of patent infringement compensation
  - f. Increasing administrative penalties for counterfeiting patents product
3. Simplify and improve relevant procedures
  - a. When an invention patent had been filed in a foreign country, the patent application acceptance may require applicant to provide the relevant examination information
  - b. Cancel revocation procedure
  - c. Increasing the third party participate in the patent invalidation procedure
4. Increasing the international patent application accord with the procedures of Patent Cooperation Treaty

Third revision background and reasons:

1. Patent spreading policy is not clear enough, is not conducive to China's independent innovation;
2. The conditions for granting patents are not strict enough, so that some inventions with little innovation are granted patent rights;
3. The right of utility model and the design are not stable enough, which affects the patent quality of China
4. The protection of interests of patent holders is not effective in time; 4. Some abuses of patent right has not been regulated effectively.

Third revision process: patent law amendment research project started in April 2005; Chinese Intellectual Property Office investigated the United States and Japan in 2006; Draft law report to the State Council in 2007; The State Council passed the draft in 2008 (Zhan, 2008).

The third amendment of Chinese patent law:

1. Improving granting standards
  - a. Changing the hybrid novelty to absolute novelty
  - b. Increasing protection of genetic resources and disclosure of genetic resources
  - c. Increasing may not apply patents to foreign without confidential review
  - d. The same invention can only be granted one patent
2. Perfecting design patent application
3. Strengthen the protection of patent right
4. To prevent the abuse of patent right
5. Simplified administrative examination and approval (Yu & Du, 2014).

## Chinese Trademark Law

Trademark law was established in 1982. Then China joined the "Paris Convention" was in 1985 and joined the "Madrid Agreement" in 1989. In order to meet the needs of the development of market economy, the Trademark Law of the people's Republic of China was revised for the first time in 1993 (Gao, 2011).

Second revision background and reasons: Expanding the scope of protection of trademark subject and object; Rigid trademark rights ownership procedures, increase judicial review; Increase the administrative departments of industry and commerce to investigate trademark infringement means and increase judicial relief procedures (Qisheng, 2015).

The twenty-fourth session of the nine national people's Congress Standing Committee voted and pass the new the trademark law of the People's Republic of China in 27 October 2001. This law provision increases from 43 to 64, for China joining in the World Trade Organization and Complying with the relevant requirements of TRIPS. The reversion has far-reaching impact on China's trademark business (An, 2009).

The second amendment of Chinese trademark law:

1. Collective trademarks, certification marks and geographical indications are trademarks protection scope
2. Grant three-dimensional mark as trademark
3. Increasing well-known trademark protection, clearly identified well-known trademark application factors
4. Establishing the principle of judicial final adjudication of trademark
5. Increasing administrative departments to investigate trademark infringement means and the pre-trial application for property preservation, evidence preservation and other relief measures

Third revision background and reasons:

1. Provisions of the trademark review period;
2. Perfect trademark registration objection system;
3. Perfect well known trademark protection system;
4. Strengthen the protection of trademark right;
5. Regulate the use of trademarks and safeguard fair market order;
6. Regulate the act of trademark agency.

The fourth session of the twelve national people's Congress Standing Committee voted and pass the new the trademark law of the People's Republic of China in 27 October 2001, implemented in 21 May, 2014. The third amendment to the Trademark Law of China's last trademark law made 53 changes is the biggest change in content (Zhang et al., 2014).

The third amendment of Chinese trademark law:

1. Clear the relationship between trademark registration and use
2. Registration trademark is formal right and using trademark is real right
3. The use of trademark could apply objection procedure
4. Registered trademark infringement damages need to use trademarks for three consecutive years.

## **Chinese Copyright Law**

Legislation time of copyright law of the people's republic of China is in 1990. The purpose of legislation is to protect the rights and interests of copyright owners, stimulate their creativity, and promote the development of economy, science and technology and the prosperity of culture and art (Feng, 2002).

First revision background and reasons: For more effective protection of the interests of copyright holders, while meeting the needs of China's accession to the World Trade Organization. The copyright law amendment, starting from the actual needs of China's reform and the development of socialist market economy, reference to TRIPS and Berne convention to amend (Sun, 2005).

First revision process: The State Council submitted the People's Republic of China copyright law amendment (Draft) to the NPC Standing Committee in 28 November 1998. The State Council submitted the People's Republic of China copyright law amendment (Draft) to the NPC Standing Committee in 29 November 2000 again. The nine national people's Congress Standing Committee set the first review in 16 December 2000. The twenty-first session of the nine national people's Congress Standing Committee set the second review in 27 April 2001. The twenty-fourth session of the nine national people's Congress Standing Committee voted and pass the new the copyright law of the People's Republic of China in 27 October 2001 (Zhang, 2016).

The first amendment of Chinese copyright law:

1. Increasing the rights enjoyed by copyright owners
2. Expanding the protection object of copyright
3. Subject right adjustment of neighboring right
4. Restriction of copyrights
5. Copyright protection in Network Environment
6. Judicial protection of copyright

The second amendment to the copyright law shall be a minor amendment; It is mainly the formulation and improvement of some supporting laws and regulations of copyright law.



## Other Two Intellectual Property Laws

The legislation on protection of layout design of integrated circuits in China is mainly influenced by international legislation. It is conducive to the protection of the exclusive rights of layout design of integrated circuits, to encourage the innovation of integrated circuit technology, and to promote the development of science and technology.

In order to protect the rights of new varieties of plants, encourage the development and use of new varieties of plants, and promote the development of agriculture and forestry, so regulations on the protection of new varieties of plants.

## STAGE ANALYSIS OF INTELLECTUAL PROPERTY DEVELOPMENT TRANSFORMATIONS

### The Goal of Intellectual Property System in China

Socialism with Chinese characteristics, including the road of socialism with Chinese characteristics and the theoretical system of socialism with Chinese characteristics. The road of socialism with Chinese characteristics means that the Chinese Communist Party led the Chinese people to carry out the reform and open up a Chinese style modernization road. The theoretical system of socialism with Chinese characteristics refers to the Chinese Communist Party combines Marx's theory with Chinese reality to realize the latest theoretical achievement of the Sinicization of Marxism in China (Mingyan & Mingjiang, 2016).

The six main contents of the theoretical system of intellectual property rights with Chinese characteristics are the theoretical basis of this paper (Xiaofei, 2015).

1. **Ontology of Intellectual Property.** Ontology is the cognition and summary of the existence and essence of intellectual property rights. The ontology of intellectual property mainly answers the question what intellectual property is. It takes the right as the core, and takes the concept, the nature, the characteristic, the subject, the object, the use, the restriction, the protection and the system of the intellectual property as the research content.
2. **Theory of Intellectual Property Value.** The theory of value is the intellectual property right to the main body and the main body of the evaluation of the operational effectiveness of the understanding and generalization, is the theoretical basis of intellectual property rights theory system. The value theory of intellectual property mainly answers the value orientation and target selection of the intellectual property system.
3. **The Institution Theory of Intellectual Property.** The theory of system is the cognition and summary of the formulation and implementation of the intellectual property law, the formation and evolution of intellectual property law, and the core content of the research of intellectual property theory system. The theory of intellectual property system mainly answers the problems of intellectual property legislation, administrative law enforcement and justice. It takes the legal norm as the object, studies the scientific nature, the legitimacy and the rationality of the construction of the intellectual property system, as well as the validity, the coordination and the appropriateness of the implementation of the system (Rong, 2009).
4. **Intellectual Property Policy Theory.** Policy theory is an important part of intellectual property rights theory, which is the cognition and summary of the planning, formulation, implementation and evaluation of intellectual property policy. The intellectual property policy on the main answer as a public policy tool of intellectual property rights, and how to promote the service and choose the social development goal, starting from the theory of policy science, the research of intellectual property policy subject, policy formation, policy effectiveness and policy goals etc.
5. **Intellectual Property Operation Theory.** The theory of operation is an important part of the research on the theory of intellectual property rights. From the perspective of economic and

social development, the theory of intellectual property rights operation analyzes the operation status of intellectual property rights. It is based on ontology of intellectual property rights, the theory of system and policy, and the whole process and aspect of the intellectual property right from the production to the actual effect.

6. **Intellectual Property Culture Theory.** Culture is to understand and summarize the idea and behavior pattern of people about intellectual property, is the basic element of system of intellectual property right theory. The main answer of two questions: cultural foundation of intellectual property system and the modernization of legal culture (Xiaofei, 2014).

### The Stage of Intellectual Property in China

Legislation time of the patent law of the people’s Republic of China is in 1984; First revision is in 1992; Second revision is in 2000; Third revision is in 2008.

Legislation time of trademark law of the people’s republic of China is in 1982; First revision is in 1993; Second revision is in 2001; Third revision is in 2013.

Legislation time of copyright law of the people’s republic of China is in 1990; First revision is in 2001; Second revision is in 2010.

Legislation time of integrated circuit protection law is in 2001, and legislation time of new plant varieties protection is in 1997.

Base on the above legislation time and revision time, there are five stages in Chinese intellectual property development (Figure 1):

First stage is from 1980 to 1990. There are two intellectual property law which are legislation of patent law and trademark law. This stage is initial stage of intellectual property law.

Second stage is from 1990 to 2000. There are two legislation laws which are copyright law and new plant varieties protection law and two revision law which are first revision of patent law and trademark law.

Third stage is from 2000 to 2010. There are four revision laws which are second and third revision of patent law, second revision of trademark law and copyright law and one legislation law of

Figure 1. Stage of intellectual property development in China

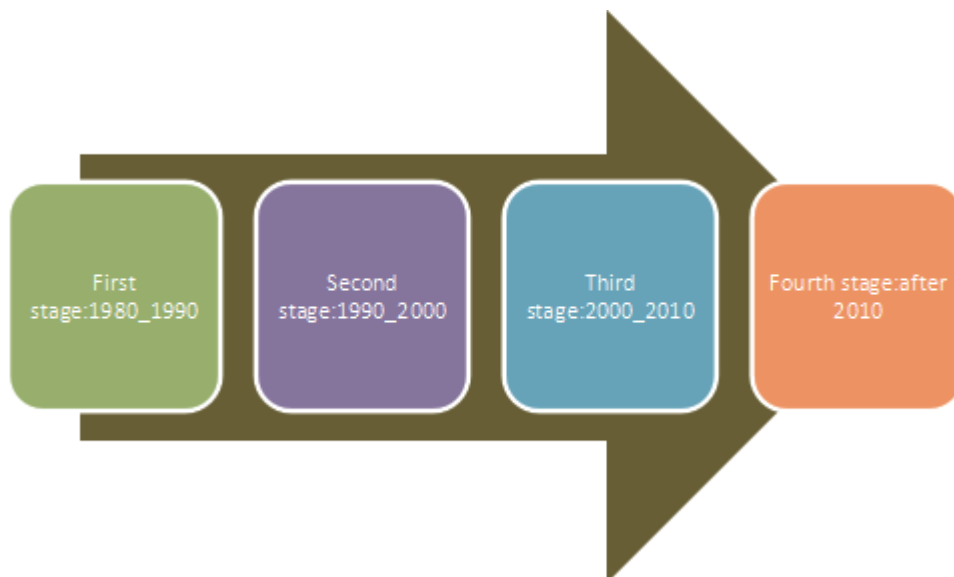


Figure 2. Development index of intellectual property law in China

Purpose Index	Patent law				Trademark law			
	1984	1992	2000	2008	1982	1993	2001	2013
Ontology								
Value	✓	✓	✓	✓	✓	✓	✓	✓
Institution	✓	✓	✓	✓	✓	✓	✓	✓
Policy	✓	✓	✓	✓	✓	✓	✓	✓
Operation					✓	✓	✓	✓
Culture								
Purpose Index	Copyright law			Integrated circuit	New plant varieties			
	1990	2001	2010	2001	1997			
Ontology								
Value	✓	✓	✓	✓			✓	
Institution	✓	✓	✓	✓			✓	
Policy	✓	✓	✓	✓			✓	
Operation								
Culture								

integrated circuit protection law. This stage is development and perfection stage of intellectual property law.

Fourth stage is after 2010. There is only one revision law which is trademark law. This stage is maturity stage of intellectual property law.

The deficiencies between entire of intellectual property development transformations and development goal:

The following statistical basis:

Ontology theory refers to there is intellectual property in intellectual property law;

Value theory refers to function of intellectual property, there are protective measures clauses;

Institution and policy theory refer to there are management organizations and management methods in legal provisions;

Operation theory refers to transfer and trade of intellectual property, does not include compulsory licensing;

Culture theory refers to there are some culture words in legal provisions, for example religion.

In the Figure 2, there are four index in intellectual property law, the name are ontology, value, institution, and operation. Because there is no intellectual property in patent law, trademark law, copyright law, integrated circuit and new plant varieties law. There is no culture words in patent law, trademark law, copyright law, integrated circuit and new plant varieties law. There are assignments and

Figure 3. Development index of intellectual property law stage in China

Purpose Index	Stage			
	First	Second	Third	Fourth
Ontology				
Value	✓	✓	✓	✓
Institution	✓	✓	✓	✓
Policy	✓	✓	✓	✓
Operation	✓	✓	✓	✓
Culture				

licensing in trademark law. There are protection measures, management organizations and management methods in patent law, trademark law, copyright law, integrated circuit, and new plant varieties law.

In Figure 3 there are four index in four stage of intellectual property development. The names are ontology, value, institution, and operation. Figure 3 is a conclusion to Figure 2.

During the stage of intellectual property development, there are two imperfection indices, and the two imperfection indices are the directions of legislation and transformation. The two imperfection indices are ontology and culture.

## **CONCLUSION**

Ontology and culture are all the upper concept, but they are different. Because of ontology of intellectual property is highly theoretical and nonrepresentational, Therefore, it is easy to break away from the social phenomenon and legal fact in the course of the research, which leads to empty and conceptual research result. However, intellectual property culture theory is based on the current society, then innovate and develop it.

Currently, ontology of intellectual property is a bit ideological. Although the legislation does not clearly reflect it, but politics and education is very obvious in China. For example, under the State Council, it is set the State Intellectual Property Office of the PRC, they are set intellectual property management institution under provincial and municipal governments. There are also some intellectual property law courses in some well-known colleges and universities. All of these are embodiment of intellectual property ontology. At present, intellectual property culture theory is no ideological in China.

Whether it is the exploration of intellectual property theory in the West in the past few years, or thirty years of intellectual property system in China, ontology has always been a hot research topic in the academic circles, and it has produced different understandings. This is particularly reflected some issues in the basic definition of intellectual property rights, the nature of the object, the nature of intellectual property rights. Among them, the understanding of the nature and function of intellectual property rights is not limited to the level of legal research, but also in other fields. Civil law sense of intellectual property, the sense of management of intangible assets, the economic significance of information property rights, policy tool of policy science, trade rules of international trade, all they reveal the basic connotation of intellectual property. Research on the ontology of intellectual property which help to achieve the scientific nature of intellectual property law, apply accurately, operate effectively.

The main content of the theory of intellectual property culture, one is to study the basic elements of intellectual property rights, including the awareness of private rights, innovation, awareness of the rule of law and market competition, honesty and so on; Two is to study the basic functions of intellectual property culture, including the relationship between cultural construction, system construction and economic and social development. The three is to study the basic path of intellectual property culture development, including the construction of the policy environment, the construction of educational environment, the cultivation of talent environment, the market environment and so on. The research methods of intellectual property culture should focus on two aspects: On the one hand, the inheritance, that is base on the root of the local cultural resources and to carry it out the necessary carding, selection and transformation which will be giving full play to the unique values of Chinese culture. On the other hand, it is based on innovation, which is committed to the innovation of modern culture, including not only the original construction of spiritual quality, but also the introduction of the system, experience, and values transplantation.

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