

# *Analysis on Change of Formulation of Standards in the New Standardization Law*

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**Abstract**—The significant modifications are made for the Formulation of Standards Section in the newly amended Standardization Law. Under the premise that the development trend of standardization in the new period is considered, and also mainly based on the basic requirements of standardization reform, this amendment provides the legal and institutional guarantee for the standardization reform. At first, this paper makes a brief introduction about major changes to Formulation of Standards specified in the New Standardization Law. Then, it emphasizes on the analysis of the change to the formulation of compulsory standards, the establishment of association standards, and the basic principles for formulation of standards. Among which, the changes of compulsory standards are mainly reflected in the integration of the original compulsory national, industrial and local standards into the compulsory national standards, the redefinition of scope & setting of compulsory national standards, and the functional division of compulsory standards formulation. Besides, this paper also analyzes a major breakthrough in this law amendment in terms of two aspects, namely, the basis of granting the legal status to the association standards and China's management on association standards. Finally, this paper respectively interprets and describes the basic principles of standards formulation.

**Keywords**—*New Standardization Law, Formulation of Standards, Compulsory Standards, Association Standards, Basic Principle*

## I. INTRODUCTION

There are totally 15 articles in Chapter Two "Formulation of Standards" of the newly amended Standardization Law of the People's Republic of China (Hereinafter referred to as "New Law"), which is the major part of the entire Standardization Law, and also the core contents of New Law. The difference between the New Law and Standardization Law of the People's Republic of China enacted in 1988 (Hereinafter referred to as "Old Law") is also mainly reflected in the Formulation of Standards. This paper will present the discussion about the compulsory standards, voluntary standards, association standards and others.

The formulation of standards are stipulated in Article 6 to 13 of the Old Law, including standards classification, principles for formulation of standards, methods for formulation of standards, and others. Based on the Old Law, the New Law fully considers the development trend of standardization works in the new era. As per the requirements of Reform Plan, it adopts the practice of providing the legal

basis and institutional guarantee for the reform, simultaneously considering the mature experiences existed in the actual practice, and reaching the consensus among the relevant departments, as the basis of revision. As to the Formulation of Standards in Chapter 2, the major changes are as shown below:

*A. The compulsory standards shall be integrated to prevent from the overabundance of compulsory standards.*

As per the requirements of Reform Plan, the New Law specifies as follows: Firstly, the existing compulsory national, industrial and local standards are integrated into the compulsory national standards, the scope of which is strictly defined as protecting the human health, person and property safety, national security, ecological environment safety and conforming to the technical requirements of basic demands of social and economic management. Meanwhile, the compulsory industrial and local standards are cancelled. Secondly, it is defined that the competent administrative department of standardization of the State Council shall take charge of the project initiation, numbering, and public notification of compulsory national standards, and that the relevant administrative departments of the State Council shall, according to their respective functions, take charge of the introduction of proposals, drafting organization, request for comments, and technical review of projects of compulsory national standards. Thirdly, In order to collectively manage the compulsory national standards and enhance their Authoritativeness, it is stipulated that the compulsory national standards shall be approved and issued by the State Council or as authorized by the State Council.

*B. The effective supply of standards shall be enhanced to meet the market demands.*

It is required to solve the aging, omission and backward problem of standards. Firstly, it is further defined the duties of the standardization administration department under the State Council, competent administrative authorities under the State Council, and local standardization administration departments to separately formulate the voluntary national, industrial, and local standards. Secondly, in order to ensure that the standards can actually reflect the market demands, it is specified that both the compulsory and voluntary standards shall not be approved until the actual demands of competent administration departments, enterprises, social organizations, and others shall be investigated and the comments are sought in a variety of ways and as per the convenient and effective principle. As to

the standards projects desperately needed by national economy and social development, the standardization administration department under the State Council and competent administrative authorities under the State Council shall implement the priority approval and determine the deadline. Thirdly, in order to satisfy the actual demands of local standardization works, the formulation rights of local standards shall be decentralized to the city and autonomous prefecture with districts. It is specified that the competent administrative authorities of people's government of the city and autonomous prefecture with districts can formulate the local standards of within the corresponding administrative areas, as per the special requirements of the corresponding administrative areas and approved by the competent administrative authorities of people's government of the local province, autonomous region, and municipality. Fourthly, it is intended to boost the vitality of market entities and encourage the social organizations & enterprises to independently formulate the standards. The state encourages the social organizations to formulate the association standards, while the enterprises may independently formulate the enterprise standards as per the requirements.

*C. The coordinated & unified standards system shall be established to ensure the coordination & support among all sorts of standards.*

Firstly, it is required to clarify the relationship among three sorts of government-dominated-and-formulated voluntary standards. It is specified that the voluntary national standards are the national standards that are formulated to satisfy the supporting requirements of basic and compulsory national standards, and play the leading role in all the relevant industries. Where, in the absence of national standards, technical requirements for a certain industry need to be unified, industrial standards may be formulated. In order to satisfy the local natural conditions, manners and customs, and other special technical requirements, the local standards may be formulated. Secondly, the hierarchical positioning of standards at all levels shall be defined. Besides, it is also specified that the technical requirements of voluntary national and industrial standards shall not be lower than the relevant technical requirements of compulsory national standards, while the technical requirements of local, association and enterprise standards shall not be lower than the relevant technical requirements of compulsory standards. Thirdly, in order to play a better role of standards in promoting the national economy and social development, it is defined that the compulsory standards shall be open and accessible to the public without any charge for search. The state promotes to make the voluntary standards open to the public without any charge.

## II. ANALYSIS OF CHANGE OF THE COMPULSORY STANDARDS REGULATION

The compulsory standards are regulated in the Article 10, 15, 16, and 17, and Paragraph 1 of Article 21 of the New Law, involving the formulation scope & procedure of compulsory national standards, working & organization requirements of formulation of compulsory standards, disclosure of compulsory standards, the relationship between the compulsory standards and other standards, and etc. In the Old Law, only Article 7

specifies the compulsory standards as follows: "National standards and industrial standards shall be classified into compulsory standards and voluntary standards. Those for safeguarding human health and ensuring the safety of the person and of property and those for compulsory execution as prescribed by the laws and administrative rules and regulations shall be compulsory standards, the others shall be voluntary standards. The local standards formulated by standardization administration departments of provinces, autonomous regions and municipalities directly under the Central Government for the safety and sanitary requirements of industrial products shall be compulsory standards within their respective administrative areas." Compared with the Old Law, the content and scope of the compulsory standards regulation are greatly increased in the New Law, which reflects the high value the state places on the compulsory standards. Such change is mainly arising from all sorts of problems occurred in the application practice of compulsory standards in recent 20 years, and the national strong urge for strengthening the management of compulsory standards in future.

### A. Scope and Setting of Compulsory National Standards

As per the regulations of Old Law, the compulsory industrial standards and local standards are formulated and released by 28 departments and 31 provinces, autonomous regions and municipalities, while the total amount of three-level compulsory standards reaches 11224 (inclusive of 4201 nos. of compulsory national standards, 3866 nos. of compulsory industrial standards, and 3157 nos. of compulsory local standards). The formulation of compulsory standards is featured in many entities, large quantity, and crossed, repeated and contradictory problems, which causes the users & regulations of standards to be confused about what standards to follow. Therefore, it is defined in the New Law to cancel the compulsory industrial standards and local standards, and only retain the compulsory national standards, realizing the "Single Market, Single Bottom Line and Single Standards". The cancellation of compulsory industrial standards and compulsory local standards are mainly served to uniformly coordinate the formulation of compulsory standards, avoid the crossed, repeated and contradictory phenomena, and ensure the unity of justice and law enforcement. In order to solve the existing problems of the aforesaid compulsory standards, the compulsory national standards are strictly limited to the scope of safeguarding the human health, safety of the person and of property, national security, and ecological environment security, and satisfying the basic requirements of social and economic management[1].

Those standards for safeguarding the human health and ensuring the safety of the person and of property, such as GB 4706.12-2006 Safety of Household and Similar Electrical Appliances Particular Requirements for Storage Water Heaters series national standards, raises the definite requirements upon the safety and reliability of household and similar electrical appliances, which is applicable to electrical appliances for household and similar purposes, with their rated voltage being not more than 250V for single-phase appliances and 480V for other appliances. Those standards for protecting the national security, for instance, GB 17859-1999 Classified Criteria for Security Protection of Computer Information System, specify

five classes of security protection capacity of computer system, which plays an important role in protecting the computer security. Those standards for protecting the ecological environment security, for instance, GB 3095-2012 Ambient Air Quality Standards, specifies the environmental air functional area classification, standard grading, pollutant items, the average time and concentration limits, monitoring methods, data statistics, the effectiveness of the provisions and implementation and supervision and so on. Those standards for satisfying the basic requirements of social & economic management, for example, GB 11643-1999 Citizen Identification Number and GB 32100-2015 Coding Rule of the Unified Social Credit Identifier for Legal Entities and Other Organizations, specify the citizen identification number, coding objects, and structure and representation style of number of the unified social credit identifier for legal entities and other organizations, allowing each coding object to obtain a sole and fixed legal number.

### *B. Formulation of Compulsory National Standards*

#### *1) Functional Division of Formulation of Compulsory Standards*

The functional division of formulation of compulsory standards is defined in the New Law, specifying as follows: "The relevant administrative departments of the State Council shall, according to their respective functions, take charge of the introduction of proposals, drafting organization, request for comments, and technical review of projects of compulsory national standards. The administrative department of standardization of the State Council shall take charge of the project initiation, numbering, and public notification of compulsory national standards. The administrative department of standardization of the State Council shall conduct project initiation examination on whether the compulsory national standards to be developed comply with the preceding paragraph, and initiate projects that comply with the preceding paragraph", which comes from the Plan for Furthering the Standardization Reforms enacted by the State Council.

In order to effectively safeguarding the unity of compulsory national standards, authority, and enforceability, it is specified in the New Law as follows: "Compulsory national standards shall be approved and issued by the State Council or as authorized by the State Council." Where, "Approved and issued by the State Council" means that some inter-departmental or cross-disciplinary compulsory national standards and compulsory national standards in significant impacts are submitted to the State Council for approval and issuance after being reviewed by the coordination and promotion mechanism of State Council. Where, "Authorized by the State Council" means that the synchronized and uncontroversial compulsory national standards for most departments shall be approved by the competent standardization departments authorized by the State Council, and submitted to the State Council for issuance. The issuance may be made in the form of documents of State Council, or in the form of compulsory national standards announcement by the competent standardization departments authorized by the State Council, and also be published on the Bulletin of the State Council.

#### *2) Exceptional Circumstances of Management of Compulsory Standards*

The compulsory standards shall be integrated and streamlined, namely, the compulsory national standards, industrial standards, and local standards is integrated into the compulsory national standards, which is intended to establish the unified compulsory standards system, effectively avoid the crossed, repeated and contradictory phenomena occurred among standards, prevent from the occurrence of trade barriers and local protection, realizing the "Single Market, Single Bottom Line and Single Standards". However, the exceptional circumstances of compulsory standards are stipulated in the New Law as follows: "Where any laws, administrative regulations, and decisions of the State Council provide otherwise for the development of compulsory standards, such provisions shall prevail", which is doubtlessly a regret, and also the reason why the compulsory national standards does not completely realize the unified management at present. The management of exceptional circumstances of compulsory standards includes three cases, while it is stipulated in the first case as follows: "If the laws and regulations have otherwise provided for the standards, the existing laws and regulations shall prevail." At present, there are 11 nos. of laws and 4 nos. of administrative regulations have otherwise regulations about the formulation of standards, for instance, Environmental Protection Law and Food Safety Law, involving the environmental protection, engineering construction, food safety, drugs, veterinary drugs, agricultural genetically modified organisms safety, occupational health, and statistics, totally 8 fields, and including the compulsory national standards therefrom and the compulsory local standards of environmental protection, building energy efficiency, and food safety. As per China's current status, these standards cannot be incorporated into the unified administration, until the relevant laws & regulations are revised. It is stipulated in the second case as follows: "The compulsory national, industrial and local standards of environmental protection, engineering construction and medical and health care, shall be managed as per the current model." The standards therefrom partly belong to the "the laws and regulations have otherwise provided" mentioned in case 1 and partly belong to the "(compulsory standards of environmental protection, engineering construction and medical and health care) without the support of relevant laws and regulations". It is stipulated in case 3 as follows "production safety, public security and tax standards shall be managed temporarily as per the current model". Where it is stated as "Temporarily as per", means these are the transitional interim measures and exceptional circumstances are not provided in the New Law, while the transitional period will be provided in the actual works to gradually integrate these standards into the compulsory national standards.

### **III. MAJOR BREAKTHROUGH IN THE REVISED LAW: ESTABLISHMENT OF ASSOCIATION STANDARDS**

One major breakthrough in this revised law is to incorporate the association standards into the New Law for the first time, which solves the legal status problem of association standards in the legal sense. It is stipulated in the New Law as

follows: "The state encourages the society, association, chamber of commerce, federation, industrial technical alliance and other social groups to coordinate the relevant market entities to jointly develop the association standards that can satisfy the market and innovation requirements, which shall be agreed and adopted by their own members of these groups or voluntarily adopted by the public as per the regulations of these groups." "The formulation of association standards shall follow the open, transparent and fair" principle, ensuring all participants can obtain the relevant information, reflect the joint demands of each participant, and also organize the investigation, analysis, testing and demonstration to relevant matters of standards." "The administrative department of standardization of the State Council shall normalize, guide and supervise the formulation of association standards in conjunction with the relevant administrative departments of the State Council."

#### A. *Basis for Granting the Legal Status to Association Standards*

In recent years, it is definitely proposed in the policy documents published by the State Council and relevant departments to cultivate and develop the association standards, while these policy documents may be deemed as the significant basis for granting the legal status of association standards. For example, it is definitely proposed "to cultivate and develop the association standards" in the Plan for Furthering the Standardization Reforms enacted by the State Council. Besides, it is also definitely proposed in the Opinions of the State Council on Promoting Fair Market Competition and Maintaining the Normal Market Order "to play the self-regulatory role of industry organizations, promote the industrial associations and chambers of commerce to establish and perfect the industrial operation self-discipline regulations, self-discipline pacts, and code of professional ethics, and normalize the member behaviors, and also encourage the industrial associations and chambers of commerce to formulate and release the product and service standards and participate in the formulation of national standards, industry planning and policy laws and regulations". Besides, Opinions on Promoting the Integrity & Self-discipline Construction Works of Industrial Association & Chamber of Commerce issued by Ministry of Civil Affairs and other eight government ministries. In the stipulation regarding measures of promoting the industrial association and chamber of commerce to establish and perfect the industrial self-discipline mechanism, it is stipulated as follows: "to normalize the industrial development order and support the industrial associations and chambers of commerce to carry out the standardization works; to encourage the industrial associations and chambers of commerce to formulate and publish the products and service standards of their own industries, actively participate in the formulation of national standards, industrial planning and policy laws & regulations, and continuously enhance the industrial product & service quality."

#### B. *China's Management on Association Standards*

##### 1) *Policies Related to Association Standards*

In terms of the normalization of association standardization works, establishment of basic information publicity system, unification of coding rules, conduct of good practice assessment, and strengthening of assessment and supervision, the Guiding Opinions on Cultivation and Development of Association Standards jointly issued by the former General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and Standardization Administration of the People's Republic of China, normalizes, guides and supervises the association standards. Besides, it is also definitely stated in the Plan for Furthering the Standardization Reforms not to set any administrative permission in administration of standards, but allow the social organizations and industrial technical alliance to arbitrarily formulate and issue the standards and survive the fittest via market competition. The administrative department of standardization of the State Council shall formulate the association standards development guideline and code of good practice for standardization in conjunction with the relevant administrative departments of the State Council, to provide the necessary normalization, guidance and supervision to the association standards.

##### 2) *Management System Design of Association Standards*

At present, the management system design of association standards adopts the cultivation and guidance of association standards as the basic management standpoints, while the post event management-dominated measures are applied to realize the management targets. Finally, as per the variable stages of development of association standards, the phased management policy shall be implemented upon the formulation institutions of association standards.

Firstly, it is required to formulate the guideline for carrying out the association standardization activity, while those professional societies, associations and industrial technical alliances with good practice & operation and great popularity & representation shall be encouraged and given priority to carry out the pilot programs of association standards. Secondly, the good practice pattern shall be provided for the Association Standardization-Code of Good Practice and other policy documents and basic national standards, realizing the legitimacy and autonomy of association standards and guiding the development of association standardization. Thirdly, it is required to explore and establish the voluntary assessment system, organize the third party to carry out the good practice assessment, and guide the society to apply the association standards with good practice. Fourthly, as per the requirements of Reform Plan, the government will narrow down the formulation scope of voluntary standards to the public welfare standards, providing the necessary development space for the development of association standards.

Through defining the legal status of association standards in the Standardization Law, synchronous formulating the relevant policy, and cultivating, guiding and normalizing the development of association standards, it can not only completely decentralizing the association autonomy of standards formulation, and driving the overall development of

association standardization with the good practice code association, but also establishing the platform and channel for association to participate in the national standardization and international standardization, pushing the association standards from the pilot to relatively mature, and then to prosperous, and establishing the new standard system where the government dominated and formulated standards will be synergistically developed and coordinately supported with the standards autonomously formulated by the market [3].

#### IV. BASIC PRINCIPLE FOR FORMULATION OF STANDARDS IN NEW LAW

With regard to the formulation principle of standards, the New Law is more comprehensive and scientific than the Old Law. It is specified in the New Law as follows: "The formulation of standards shall be in favor of the scientific and reasonable utilization of resources, the promotion of scientific and technical achievements, the enhancement of product safety, commonality, and replaceability, the improvement of economic, social and ecological efficiency, being advanced in technology and reasonable in economy."

##### A. Principle of Reasonable Utilization of Resources

The formulation of standards shall be in favor of the reasonable utilization of resources. Focusing on the resources saving, energy conservation and emission reduction, recycling, environmental treatment and ecological protection, the formulation of standards shall strengthen the development & enforcement of significant ecological and environmental standards, enhance the energy, water, land, material, and mineral saving standards, expedite the R & D of energy efficiency & consumption, carbon emission, energy-saving and environmentally-friendly industries, circular economy, and ambient air, water and soil pollution control standards, push the ecological protection and construction, and enhance the green, circular, and low-carbon development level. Besides, emphasizing on the improvement of social governance methods, optimization of public resources allocation, and enhancement of people's livelihood protection level, the formulation of standards shall push the formulation of food & drug safety, production safety, disaster prevention, mitigation and relief, and social credit standards, improve the social management scientization level, and promote the social development in a more fair, safe and orderly manner.

##### B. Principle of Promoting the Scientific & Technical Achievements

The formulation of standards shall promote the scientific & technical achievements, strengthen the interaction between standards and science & technology, list the R & D of significant standards into the supporting scope of national science and technology program, put standards as the significant assessment index of relevant science & technology projects and basis of professional technical qualification appraisal, and apply the scientific and technical report system to facilitate the conversion from scientific & technical achievements to standards [4]. It is required to strengthen the combination between patents and standards, and promote the standards to reasonably adopt the new technology.

Emphasizing on the unification of market rules, adjustment of industrial structure, and promotion of conversion of scientific & technical achievements, the formulation of standards shall accelerate the formulation of modern agricultural & new rural construction standards and producer services standards, and pilot demonstration, push the organic integration of services, industry and agriculture at a much higher level, facilitate the economic quality enhancement, efficiency increase, and upgrading, and push the China's economy to enter into the middle-and-high end level.

##### C. Principle of Safeguarding the Product Safety

The formulation of standards shall use the safeguarding the product safety as the basic bottom line, while the product safety is concerning the improvement of people's livelihood and wellbeing, the sustainable increase of consumption, the economic quality enhancement and efficiency increase, and the international image promotion. Standardization is the premise and foundation for improving the product quality and safeguarding the product safety. In Made in China 2025, it is proposed to facilitate the light industry, textile industry and other industries to develop towards the high end of value chain, while the product quality standards system shall also be perfected. In Reform Plan, it is proposed to realize the target that the consistency degree between the major consumer goods standards and international standards shall reach above 95% till 2018. In 2016, it is required in the Report on the Work of the Government to enhance the quality of consumer goods, and accelerate the integration of quality safety standards into the international standards. Besides, it is required in the Thirteenth Five-Year Plan to implement the consumer goods quality enhancement engineering, and carry out the special action of consumer goods supply & demand improvement.

##### D. Principle of Enhancing the Commonality, and Interchangeability

The formulation of standards shall enhance the product commonality and interchangeability, which can safeguard the effective supply and usage of products, promote the enhancement of product usage efficiency, and reduce the waste of resources. The stronger the commonality is, the wider the product market becomes, the better the production flexibility is, and the stronger the market adaptability becomes. The product commonality refers to trying to use the equivalent product with different model or variable product with the same size and function of some parts & components to realize the interchangeability, reduce the working amount of design, process design, tooling design and manufacture of common parts, simplify the management and shorten the design and trial-production period of products [5].

##### E. Principle of Facilitating the Efficiency Enhancement

The formulation of standards shall facilitate the improvement of economic, social and ecologic efficiency. Standards are the technical support and economic activity and social development, and also the infrastructure system of modernization of national governance system and governance capability [6]. Adhering to the principle of accelerating the popularization and in-depth integration of standardization

within all the economic and social fields, the formulation of standards shall fully play the “standardization +” effect, and provide the technical support for China’s economic & social innovation development, coordination development, green development, open development and sharing development. The formulation of standards shall center around the major deployment of economic, political, cultural, social and ecologic civilization construction, reasonably plan the overall arrangement of standardization system, scientifically determine the key fields of development, and meet the demands of industrial structure adjustment, social governance innovation, ecologic environment protection, cultural prosperous development, the people’s livelihood safeguarding and improvement, and international economic & commercial cooperation.

#### *F. Principle of Being Advanced in Technology and Reasonable in Economy*

The formulation of standards shall adhere to the principle of being advanced in technology and reasonable in economy. The standards are the carrier of technical spread, while the contained technology shall have a certain advancement, which can enable the standards to guide the development of industrial technology. Meanwhile, the technology represented by the standards shall be implementable and feasible, and also conform to the application environments and conditions. Besides, the forecasted economic benefits brought by the application shall exceed the cost input resulted from adjusting the production process or equipment [7].

#### *G. Principle of Promoting the Trade & Communication*

The macro purpose of standards is to promote the trade and communication [8]. The standards are intended to develop the unified market, promote the mobility of goods, personnel, technology and capital, encourage the market-oriented resources allocation, and encourage the fair market competition, instead of acting as the tool to conduct the industrial monopoly and regional blockade.

### V. CONCLUSION

The revision of New Standardization Law, symbolizes that China’s standardization works take a big step toward the

scientization and legalization direction, which will definitely have a significant and profound impact upon the in-depth enforcement of Guideline regarding Carrying out Quality Enhancement Act developed by the CPC Central Committee and State Council, vigorous conduct of standardization strategy, deepening of the standardization reform, and promotion of national quality infrastructure system construction. Certainly, the revision of Standardization Law, is just one periodic perfection of Standardization Law. We believe that China’s standard development will encounter a new round of adjustment and perfection with the continuously deepening of standardization reform and practice, so as to better adapt the standardization practice works.

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#### REFERENCES

- [1] GAN Zangchun, TIAN Shihong, Interpretation for Standardization Law of the People’s Republic of China: China Legal Publishing House, 2017
- [2] TIAN Shihong, 100 Q & As of Standardization Law of the People’s Republic of China: China Zhijian Publishing House, 2017
- [3] KANG Junsheng, YAN Shaoqing, Analysis and Thought on Development of Social Group Standards: Standard Science, 2015, (3) ,pp.6-9
- [4] LIU Hui, LIU Jin, Study on Impact Mechanism of Standardization upon Industry Cluster Technical Innovation in Zhejiang Province: Science & Technology Progress and Policy, 2012, 29 (10),pp.63-66
- [5] MAI Lvbo, Standardizology: Science Theory of Standardization: Science Press, 2017.
- [6] LIU Sanjiang, Liu Hui, Considerations and Path for Reform of China’s Standardization System: China Soft Science, 2015, (7),pp.1-12
- [7] LI Chuntian, Introduction to Standardization: China Renmin University Press, 2010
- [8] Dieter Ernst. Indigenous Innovation and Globalization: The Challenge for China’s Standardization Strategy. East-West Center, 2011.